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NORTH PACIFIC AND BERING SEA OCEANOGRAPHY 1958

SPECIAL SCIENTIFIC REPORT–FISHERIES No. 312

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

SPECIAL NOTE

The International North Pacific Fisheries Commission, established in 1953 by the International Convention for the High Seas Fisheries of the North Pacific Ocean, coordinates the research of the member nations: Japan, Canada, and the United States. The resulting investigations provide data to the Commission for use in carrying out its duties in connection with fishery conservation problems in the North Pacific Ocean. Publication of this scientific report has been approved by the United States Section of the Commission.

United States Department of the Interior, Fred A. Seaton, Secretary
Fish and Wildlife Service, Arnie J. Suomela, Commissioner

NORTH PACIFIC AND BERING SEA OCEANOGRAPHY, 1958

by

Felix Favorite and Glenn Pedersen
Fishery Research Biologists
Bureau of Commercial Fisheries

Contribution No. 13 to research conducted with the approval of the United States Section of the International North Pacific Fisheries Commission.

United States Fish and Wildlife Service
Special Scientific Report--Fisheries No. 312

Washington, D. C.
November 1959

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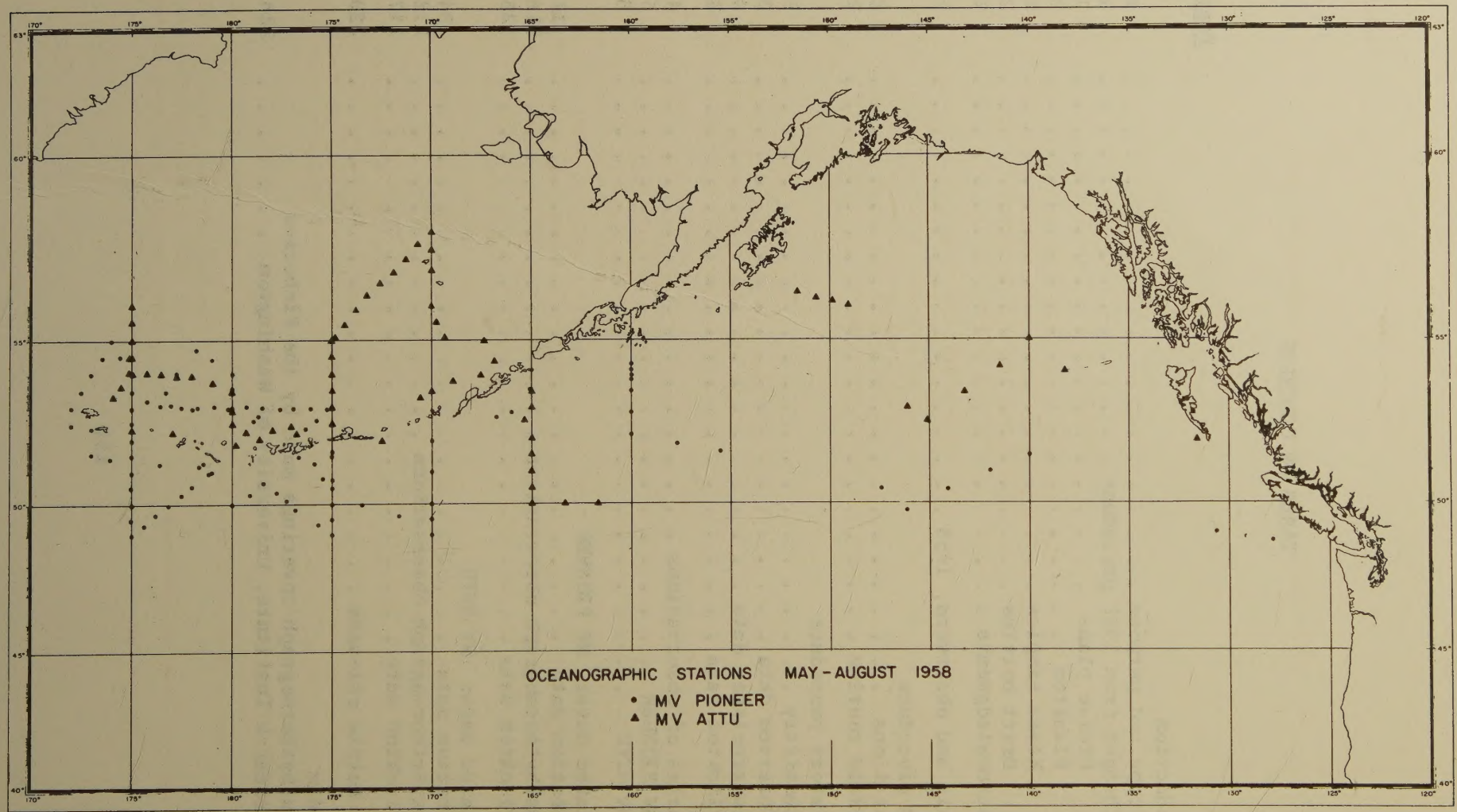
OCEANOGRAPHIC STATIONS MAY - AUGUST 1958
• MV PIONEER
▲ MV ATTU

NORTH PACIFIC AND BERING SEA OCEANOGRAPHY, 1958

by

Felix Favorite and Glenn Pedersen
U. S. Fish and Wildlife Service
Seattle, Washington

ABSTRACT

This report presents oceanographic data collected on the charter fishing vessels Attu and Pioneer at and between fishing stations in the North Pacific and the Bering Sea from May to September 1958. Procedures are described and stations are shown.

The tabulated data show temperature, and values of salinity, density, and dissolved oxygen at varying depths to 1050 meters; number, time, and position of drift bottle releases; time, position, and weather and sea conditions for bathythermograph lowerings; and displacement volumes, wet weights, and numbers of organisms per cubic meter of water for the vertical plankton hauls.

INTRODUCTION

Scope and Purpose

These data represent the second summer's field work by the Oceanographic Section of the Biological Laboratory, Seattle, [1/] under the direction of the American Section of the International North Pacific Fisheries Commission. The observations were taken on board fishing vessels chartered to continue the investigation of the distribution and migration of salmon in the North Pacific Ocean and the Bering Sea.

The purpose of the oceanographic observations is to define the general oceanic salmon environment, reveal geographical differences in the general environment, and investigate the relations of physical, chemical, and biological properties to the abundance and distribution of salmon stocks.

Changes from 1957 Procedure

Unusually severe weather in 1958 which persisted throughout the spring and summer severely curtailed the cruise plans, and at numerous times it was impossible to accomplish any work for several days.

Cruise plans.--As in the previous year reported in North Pacific and Bering Sea Oceanography, 1957, [2/] the cruise plans were determined by the fishing sets. In 1958, since only two vessels were chartered, the repeated sampling as in 1957 at 50°, 53°, and 56° N. on longitudes 165° W., 175° W., and 175° E. was discontinued, and cruise plans were constructed to provide serial fishing sets at 60-mile intervals within the above area to provide more detailed sampling.

The change in cruise plans permitted an increase in the number of oceanographic stations even with only two boats. In contrast to 1957 stations, which were at

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1/ Formerly Pacific Salmon Investigations.

2/ Felix Favorite and Glenn Pedersen, U. S. Fish and Wildlife Service, Special Scientific Report--Fisheries No. 292, May 1959.

times several hundred miles apart, the 1958 stations were generally 30 miles apart in the area investigated, regardless of whether fishing sets were made.

Plankton.--The plankton program was augmented by the use of a reduced model of a modified Isaacs-Kidd trawl used by the University of Washington in the North Pacific in 1957.[3/] The split vertical hauls utilizing the standard 1/2-meter net were replaced by vertical hauls from 150 meters to the surface as a contribution to joint work, and from 300 meters to the surface for comparison with last year's samples.

Water samples.--The general spacing of Nansen bottles remained the same. However, oxygen samples were obtained from every depth sampled instead of at only alternate depths. No attempt was made to obtain phosphate samples, which proved to be impractical last year because of limitations imposed by the small vessels and the work load.

At a temporary laboratory in Adak, salinity and oxygen samples were analyzed to afford early information on oceanographic conditions and to permit re-use of the limited number of available bottles.

Drift bottles.--We did not emphasize the drift bottles, as the possibility of recovery is limited because of the sparse population and the nature of the coastlines of the Aleutians. However, 491 bottles were released. It was suggested that fish hooks or drag lines be attached to the bottles so that they could be caught in gill nets by high-seas fishing fleets, but time did not permit incorporating this feature.

Acknowledgments

Ralph W. Riley assisted in the chemical analyses. Dr. Richard H. Fleming of the University of Washington permitted us to use the IBM interpolation program, and Cuthbert M. Love and Robert T. Gregory assisted in the IBM programming. Captain John Horton, USN, provided laboratory space at the U. S. Naval Air Station, Adak, Alaska.

3/ See William Aron, Preliminary Report of Midwater Trawling Studies in the North Pacific Ocean, University of Washington, Department of Oceanography Technical Report 58.

VESSELS AND OBSERVERS

As in 1957, davits and portable hydrographic winches operated by power take-offs were installed aboard halibut schooners to facilitate handling of oceanographic equipment. The vessels, periods of operation (defined by days in port), and oceanographic observers were as follows:

M/V Pioneer — Glenn Pedersen

Departed Seattle, 7 May
Kodiak, 14 May
Adak, 22-25 May
Adak, 13-15 June
Adak, 2-4 July
Adak, 29 July - 3 August
Sand Point, 17 August
Returned Seattle, 31 August

M/V Attu — Charles Hebard

Departed Seattle, 7 May
Sand Point, 17 May
Adak, 22-25 May
Adak, 11-14 June
Adak, 3-9 July
Adak, 31 July - 3 August
Unalaska, 12-14 August
Returned Seattle, 31 August

FIELD PROCEDURE

Stations

Oceanographic stations are designated as primary or secondary stations. Primary stations occurred at the fishing locations and included hydrographic casts to 1050 meters, a BT trace, vertical plankton hauls, and midwater trawls. Secondary stations included only a BT trace and a hydrographic cast to 325 meters.

Field Routine

On the approach to a fishing location, the routine at a primary station commenced with a stepped trawl towed at three knots from the surface to four depths (25, 50, 100, 150 meters) at 3-minute intervals for a total of 15 minutes, at which time the vessel was stopped and the trawl retrieved

during an additional five minutes. The trawl was made at this time because upon completion of setting the nets and observing the hydrographic routine, generally fog or rough weather made it inadvisable for the vessel to cast off from the nets.

After the nets were set, the observers completed the following routine:

Deep cast--Four Nansen bottles, each carrying two protected deep-sea reversing thermometers and one unprotected, were cast to 400, 500, 700, and 1050 meters.

Shallow cast--Ten Nansen bottles, all carrying two protected thermometers and the bottom six carrying one unprotected also, were cast to 10, 25, 50, 75, 100, 125, 150, 200, 250, and 300 meters.

Surface observation--The temperature was recorded from a bucket sample by using a 0° - 20° C. dipping thermometer with 0.1° subdivision.

BT lowering--The BT was lowered to 275 meters.

Water samples--Dissolved-oxygen samples were drawn from all Nansen bottles into standard dark bottles and fixed immediately. Chlorinity samples were drawn from all Nansen bottles and taken from the surface bucket into standard citrate-type bottles.

Plankton hauls--Vertical hauls were made with a standard 1/2-meter net, #6 mesh, at about 50 meters per minute from 150 and 300 meters to the surface. The samples were treated with 10 percent formalin neutralized with sodium borate.

Upon completion of the above routine, in the evening after dark, if weather conditions permitted, the trawl was towed at the surface in the vicinity of the gill nets at three knots for 15 minutes.

The primary station routine usually began about 1600-1700 zone time and was completed by 2400.

The secondary station routine, observed at midway points between the fishing locations which were usually 60 miles apart, usually occurred at noon and resulted in observations at intervals of 30 miles:

1. BT lowering--to 275 meters.

2. Shallow cast--procedure the same as at the primary station, except that the bottom bottle was generally cast to 325 meters. Near the end of the season and en route to Seattle, the depth of the bottom bottle was changed to 525 meters.

Usually additional BT's were taken between the primary and secondary stations, and drift bottles were released at designated locations shown in table 1.

LABORATORY PROCEDURE

Chemistry

Chemical analyses were performed in Adak and Seattle. Through the cooperation of the U. S. Navy, a temporary laboratory was established in Adak, where the early chlorinity samples were analyzed. Later samples were returned to Seattle for analysis. All oxygen samples except those collected on the return voyage were analyzed in Adak, thus resulting in an average delay of two or three weeks between sampling and analysis.

Chlorinity and dissolved oxygen were determined by titration by using the Knudsen and Winkler methods respectively.

Observed Data

Station No.--The chronological order in which the stations were taken. Equivalent gill net sets are listed in Summaries of Observations.

Position--Latitude and longitude determined by Loran readings at all positions and supplemented by celestial sights in some positions.

Time--The date and hour (GCT) at which the messenger was released. The second hour indicates the time of the second cast or, in case of more than two casts, the time of the final cast.

Weather observations--Coded values as presented in HO 606-C, Bathythermograph observations.

Barometer--Readings from shipboard

barometer checked with the Weather Bureau, coded in millibars.

Wet and dry bulbs--Readings from hygrometer.

Physical, chemical data--All values were plotted versus depth and checked by T-S curves to avoid transcription errors, before being punched on IBM cards similar to those used by the Hydrographic Office.

Depth - Depth in meters obtained by smoothed L-Z curve or in some instances from the wire angle.

Temp - Temperatures in degrees centigrade observed from reversing thermometers read to 0.01° C. Surface temperatures from bucket samples read to 0.1° C.

Sal - Salinity in parts per thousand as defined from chlorinity.

Oxy - Dissolved oxygen in milligram-atoms per liter.

σ t - Density, defined by (specific gravity - 1) x 1000, computed from temperature and salinity by machine program.

Interpolated Data

These data are derived entirely from observed data by a 3-point interpolation routine devised by the University of Washington for the IBM 650. However, dummy cards were inserted at 20 and 30 meters to avoid the erroneous values obtained in the mixed layer, due to the parabolic program and the bottle spacing. Dummy cards were inserted also to obtain the values at extrapolated depths indicated by an asterisk.

δ ($10^5 \delta$) -- Specific volume anomaly

Δ D (dyn m) -- Anomaly of dynamic height, in dynamic meters, of the sea surface relative to the indicated depth in meters

Plankton Data

These data are presented as numbers of organisms and as numbers of copepods per cubic meter of water filtered, the efficiency of the net assumed to be 100 percent. The total number of copepods is presented under COPEPODA in the table of organisms.

Analyses of samples (with the use of a Folsom splitter) were conducted identically to those of 1957 except that wet weights were determined before obtaining the displacement volumes. This additional measurement was made in order to conform to methods of presenting plankton data utilized by other participating members of the Commission.

Trawl data will be presented in a subsequent report

SUMMARIES OF OBSERVATIONS

Sta — Hydrographic station

Set — Gill-net set No. at this position

GCT — Median hour between messenger times, in GCT (For median hour of plankton hauls, see Plankton Data)

Date — Date of hydrographic cast

Depth — Interpolated depth in meters (Extrapolated depths indicated by asterisks)

BT — Bathythermograph lowering

T — Temperatures

Cl — Chlorinity samples

O — Dissolved oxygen samples

Pl — Plankton samples

- 1 — 150 m. to surface
- 2 — 300 m. to surface
- x — anomalous depth to surface

Tr — Isaacs-Kidd trawl

- S — Surface
- D1 — Stepped trawl from the surface to 50 m.
- D2 — Stepped trawl from the surface to 100 m.
- D3 — Stepped trawl from the surface to 150 m.

Summary of observations, MV PIONEER

Sta	Set	GCT	Date	Lat	Long	Depth	BT	T	Cl	O	Pl	Tr
1		2000	18 May	54°18'N	160°00'W	300*	x	x	x	x		
2		2400	18 May	54 00	160 00	300*	x	x	x	x		
3		2100	27 May	52 36	178 58	1000	x	x	x	x		
4	1	0800	28 May	53 00	180 00 -	1000	x	x	x	x	1,2	
5		0200	29 May	53 04	179 05 E	300*	x	x	x	x		
6	2	0700	29 May	53 00	178 15	1000	x	x	x	x	1,2	
7		0500	30 May	53 29	176 42	300	x	x	x	x		
8		1500	30 May	54 00	175 00	1000	x	x	x	x	1,2	
9		2200	30 May	54 33	174 27	300	x	x	x	x		
10	3	0400	31 May	55 00	174 00	1000*	x	x	x	x	1,2	
11		0000	1 Jun	54 30	173 33	300	x	x	x	x		
12	4	0600	1 Jun	54 00	173 00	1000	x	x	x	x	1,2	
13		0200	2 Jun	53 29	172 29	300	x	x	x	x		
14	5	0900	2 Jun	53 00	172 00	600	x	x	x	x	1,2	
15		0000	3 Jun	52 30	172 00	300	x	x	x	x		
16		2400	7 Jun	52 22	173 00	200	x	x	x	x		
17	6	0600	8 Jun	51 35	173 00	1000	x	x	x	x	1,2	
18		0100	11 Jun	51 17	178 35	300	x	x	x	x		
19		0500	11 Jun	51 00	179 00	1000*	x	x	x	x		
20		2300	16 Jun	52 42	178 51 W	300	x	x	x	x		
21	7	0700	17 Jun	53 00	180 00 -	1000*	x	x	x	x	1,2	
22		2400	17 Jun	53 32	180 00	300	x	x	x	x		
23	8	0500	18 Jun	54 00	180 00	200	x	x	x	x	1,2	S
24		0100	19 Jun	54 25	179 00 E	300	x	x	x	x		
25	9	0700	19 Jun	54 43	178 14	1000	x	x	x	x	1,2	
26		0500	23 Jun	54 02	177 15	200*	x	x	x	x		
27		2100	23 Jun	53 00	175 00	300	x	x	x	x		
28		0800	28 Jun	51 30	173 57	300*	x	x	x	x		
29		2200	28 Jun	51 15	176 25	300	x	x	x	x		
30		0900	29 Jun	51 15	178 23	300	x	x	x	x		
31	10	2300	29 Jun	50 00	180 00 -	1000	x	x	x	x	1,2	S
32		0300	1 Jul	50 19	179 08 W	300	x	x	x	x		
33		0700	1 Jul	50 38	178 28	300	x	x	x	x		
34		2000	1 Jul	51 32	176 39	300*	x	x	x	x		
35	11	0800	6 Jul	51 17	175 53	1000	x	x	x	x	1,2	S,D3
36		0100	7 Jul	50 49	175 27	300	x	x	x	x		
37	12	0700	7 Jul	50 30	175 00	1000	x	x	x	x	1,2	D3
38		0000	8 Jul	50 00	175 00	300	x	x	x	x		
39	13	0700	8 Jul	49 30	175 00	1000	x	x	x	x	1,2	S,D3
40		0100	9 Jul	49 00	175 00	300	x	x	x	x		

Sta	Set	GCT	Date	Lat	Long	Depth	BT	T	Cl	O	Pl	Tr
41		0800	9 Jul	49 20	175 41	300	x	x	x	x		
42		1800	9 Jul	49 49	176 47	300	x	x	x	x		
43		2300	9 Jul	50 07	177 15	300	x	x	x	x		
44	14	0600	10 Jul	50 22	177 45	1000	x	x	x	x	1,2	S,D3
45	15	0700	12 Jul	50 59	178 50 E	1000	x	x	x	x	1,2	S,D1
46		0100	13 Jul	50 34	178 00	300	x	x	x	x		
47	16	0700	13 Jul	50 18	177 28	1000	x	x	x	x	1,2	
48		0100	14 Jul	49 58	176 50	300	x	x	x	x		
49	17	0700	14 Jul	49 39	176 11	1000	x	x	x	x	1,2	S,D1
50		0100	15 Jul	49 18	175 37	300	x	x	x	x		
51	18	0700	15 Jul	49 00	175 00	1000	x	x	x	x	1,2	S,D2
52		0100	16 Jul	49 30	174 58	300	x	x	x	x		
53	19	0700	16 Jul	50 00	175 00	1000	x	x	x	x	1,2	D3
54		0100	17 Jul	50 32	174 58	300	x	x	x	x		
55	20	0800	17 Jul	51 00	175 00	1000	x	x	x	x	1,2	S,D3
56		0100	18 Jul	51 33	175 00	300	x	x	x	x		
57	21	0700	18 Jul	52 00	175 00	300*	x	x	x	x	1,2	S,D3
58		0100	19 Jul	52 34	175 00	300	x	x	x	x		
59	22	0700	19 Jul	53 00	175 00	1000	x	x	x	x	1,2	S,D3
60		0100	20 Jul	53 30	175 00	300	x	x	x	x		
61	23	0800	20 Jul	53 15	175 45	1000	x	x	x	x	1,2	S,D3
62		2300	20 Jul	53 06	176 25	300	x	x	x			
63	24	0300	21 Jul	53 07	176 55	1000	x	x	x	x	1,2	S,D3
64		0000	22 Jul	53 03	177 26	300	x	x	x			
65	25	0600	22 Jul	53 00	178 00	1000	x	x	x	x	1,2	S,D3
66	26	0500	24 Jul	53 00	179 48	1000	x	x	x	x	1,2	
67		0100	25 Jul	53 04	179 16 W	250	x	x	x			
68	27	0700	25 Jul	53 00	178 30	1000	x	x	x	x	1,2	S,D2
69		0100	26 Jul	52 59	177 35	300	x	x	x			
70	28	0700	26 Jul	53 01	176 54	1000	x	x	x	x	1,2	D2
71		0100	27 Jul	53 00	176 04	300	x	x	x			
72	29	0700	27 Jul	52 58	175 13	1000	x	x	x	x	1,2	S,D2
73		0100	28 Jul	52 38	175 45	300	x	x	x			
74	30	0700	28 Jul	52 22	176 17	1000	x	x	x	x	1,2	D2
75		0600	5 Aug	51 40	175 00	300	x	x	x	x		
76	31	0900	5 Aug	51 30	175 00	1000	x	x	x	x	1,2	S
77		0100	6 Aug	50 45	175 00	300	x	x	x	x		
78	32	0900	6 Aug	50 00	175 00	1000	x	x	x	x	1,2	D2
79		0000	7 Aug	49 30	175 00	300	x	x	x	x		
80	33	0600	7 Aug	49 00	175 00	1000	x	x	x	x	1,2	

Sta	Set	GCT	Date	Lat	Long	Depth	BT	T	Cl	O	Pl	Tr
81		0700	8 Aug	49 59	173 32	300	x	x	x	x		
82		1800	8 Aug	49 37	171 40	300	x	x	x	x		
83	34	0600	9 Aug	49 00	170 00	1000*	x	x	x	x	1,2	D2
84		0100	10 Aug	49 29	170 00	200	x	x	x	x		
85	35	0600	10 Aug	50 00	170 00	1000	x	x	x	x	1,2	
86	36	0700	11 Aug	51 00	170 00	1000	x	x	x	x	1,2	
87		0100	13 Aug	52 00	170 00	1000	x	x	x	x		
88		0100	14 Aug	52 42	166 46	300	x	x	x	x		
89	37	0700	14 Aug	52 51	166 00	1000	x	x	x	x		
90		0800	16 Aug	53 31	165 03	300	x	x	x	x		
91	38	0300	19 Aug	54 07	160 00	1000	x	x	x	x	1,2	S
92		2300	19 Aug	53 48	160 00	300	x	x	x	x		
93	39	0300	20 Aug	53 30	160 00	1000	x	x	x	x	1,2	S
94		0000	21 Aug	52 50	160 00	300	x	x	x	x		
95		0700	21 Aug	52 10	160 00	300*	x	x	x	x		
96		0700	22 Aug	51 54	157 40	300	x	x	x	x		
97		1900	22 Aug	51 41	155 30	300*	x	x	x	x		
98		2000	24 Aug	50 26	147 25	500	x	x	x			
99	40	0600	25 Aug	49 43	146 10	1000	x	x	x		1	S
100		0600	26 Aug	50 24	144 05	500	x	x	x			S
101		1800	26 Aug	51 00	142 00	500	x	x	x			
102	41	0600	27 Aug	51 30	140 00	1000	x	x	x		1	S
103		2200	29 Aug	49 00	130 40	500	x	x	x			
104		0600	30 Aug	48 52	129 10	500*	x	x	x			
105		1400	30 Aug	48 45	127 50	500	x	x	x			

Summary of Observations, MV ATTU

Sta	Set	GCT	Date	Lat	Long	Depth	BT	T	Cl	O	Pl	Tr
1		1050	14 May	56°00'N	149°00'W	300*		x	x	x		
2		1512	14 May	56 06	149 50	300		x	x	x		
3		1920	14 May	56 14	150 45	300		x	x	x		
4		2320	14 May	56 20	151 40	300		x	x	x		
5		2233	18 May	53 30	165 00	300*	x	x	x	x		
6		0253	19 May	53 00	165 00	300*	x	x	x	x		
7		2237	27 May	51 53	179 50	300	x	x	x	x		D3
8		2300	16 Jun	53 17	170 35	300	x	x	x	x		
9	7	0500	17 Jun	53 30	170 02	1000	x	x	x	x	1,2	S
10		0000	18 Jun	53 48	168 57	300	x	x	x	x		
11	8	0900	18 Jun	53 59	167 32	1000	x	x	x	x	1,2	
12		0100	24 Jun	54 25	166 51	300	x	x	x	x		
13	9	0600	24 Jun	54 59	167 22	200	x	x	x	x	1	
14	10	0600	25 Jun	55 04	169 24	300	x	x	x	x	1,2	
15		0000	26 Jun	55 33	169 45	300	x	x	x	x		
16	11	0500	26 Jun	55 58	170 04	200	x	x	x	x	1	
17	12	0400	27 Jun	56 57	169 58	50	x	x	x	x	x	
18		0000	28 Jun	57 31	170 00	50	x	x	x	x		
19	13	0500	28 Jun	57 59	169 59	50	x	x	x	x	x	
20		0000	29 Jun	57 40	170 41	50	x	x	x	x		
21		0400	29 Jun	57 18	171 16	50	x	x	x	x		
22		0800	29 Jun	56 55	171 52	50	x	x	x	x		
23		1200	29 Jun	56 35	172 35	150	x	x	x	x		
24		1700	29 Jun	56 15	173 14	300	x	x	x	x		
25		2100	29 Jun	55 51	173 48	300	x	x	x	x		
26		0100	30 Jun	55 27	174 23	300	x	x	x	x		
27	14	0600	30 Jun	55 04	174 52	1000	x	x	x	x	1,2	
28	15	0600	1 Jul	53 58	175 00	1000	x	x	x	x	1,2	
29		0000	2 Jul	53 29	175 00	300	x	x	x	x		
30	16	0500	2 Jul	53 01	175 00	1000	x	x	x	x	1,2	
31		2400	10 Jul	52 14	176 47	300*	x	x	x			
32	17	0400	11 Jul	52 26	177 02	1000	x	x	x	x	1,2	D3
33		2400	11 Jul	52 21	178 00	300*	x	x	x	x		
34	18	0500	12 Jul	52 04	178 38	1000	x	x	x	x	1,2	D3
35		2400	12 Jul	52 16	179 20	250	x	x	x	x		
36	19	0700	13 Jul	52 31	179 59	300	x	x	x	x	1,2	D3
37		0000	14 Jul	52 59	179 58	300*	x	x	x	x		
38	20	0600	14 Jul	53 31	180 00 -	500*	x	x	x	x	1,2	S
39		0000	15 Jul	53 41	179 00 E	300	x	x	x	x		
40	21	0600	15 Jul	54 00	178 00	1000	x	x	x	x	1,2	S,D3

Sta	Set	GCT	Date	Lat	Long	Depth	BT	T	Cl	O	Pl	Tr
41		2400	15 Jul	54 01	177 11	300	x	x	x	x		
42	22	0600	16 Jul	54 00	176 28	1000	x	x	x	x	1,2	S,D3
43		2400	16 Jul	54 03	175 45	300*	x	x	x	x		
44	23	0500	17 Jul	54 00	175 00	1000	x	x	x	x	1,2	S,D3
45		0000	18 Jul	54 30	175 00	300	x	x	x	x		
46	24	0600	18 Jul	55 00	175 00	1000	x	x	x	x	1,2	S,D3
47		0000	19 Jul	55 31	175 00	300*	x	x	x	x		
48	25	0600	19 Jul	55 54	175 01	700*	x	x	x	x	1,2	S,D3
49		0100	20 Jul	55 30	175 06	300	x	x	x	x		
50	26	0500	20 Jul	55 01	174 58	1000	x	x	x	x	1,2	S
51		0000	21 Jul	54 30	174 58	300	x	x	x	x		
52	27	0600	21 Jul	54 00	174 58	1000	x	x	x	x	1,2	S,D3
53		0000	22 Jul	53 37	174 26	300*	x	x	x	x		
54	28	0500	22 Jul	53 21	174 04	600	x	x	x	x	1,2	
55		0100	29 Jul	52 21	175 00	300*	x	x	x	x		
56		1300	29 Jul	52 15	177 01	300	x	x	x	x		
57		0000	5 Aug	52 31	174 58 W	300*	x	x	x	x		
58	29	0600	5 Aug	53 00	174 59	1000	x	x	x	x	1,2	
59		2400	5 Aug	53 30	175 00	300	x	x	x	x		
60	30	0500	6 Aug	54 00	175 00	1000	x	x	x	x	1,2	S
61		2400	6 Aug	54 30	175 00	300	x	x	x	x		
62	31	0500	7 Aug	55 01	175 00	1000	x	x	x	x	1,2	
63	32	0400	10 Aug	52 00	172 30	150	x	x	x	x	1	
64		1500	16 Aug	52 36	165 22	300	x	x	x	x		
65	33	0400	17 Aug	52 00	165 00	1000	x	x	x	x	1,2	S
66		0000	18 Aug	51 30	165 00	300	x	x	x	x		
67	34	0600	18 Aug	51 00	165 00	1000	x	x	x	x	1,2	S
68		0000	19 Aug	50 30	165 00	300	x	x	x	x		
69	35	0600	19 Aug	50 00	165 00	1000	x	x	x	x	1,2	S
70		0400	20 Aug	50 00	163 20	300	x	x	x	x		
71		1200	20 Aug	50 00	161 40	300*	x	x	x	x		
72		2300	24 Aug	53 03	146 07	300*	x	x	x			
73	36	0600	25 Aug	52 35	145 03	1000*	x	x	x		1	
74		0400	26 Aug	53 26	143 10	500	x	x	x			
--		0800	26 Aug	53 43	142 38		x					S
75		1600	26 Aug	54 13	141 33	500	x	x	x			
76	37	0400	27 Aug	55 00	140 00	1000	x	x	x		1	S
77		0500	28 Aug	54 05	138 12	500	x	x	x			S
78		2000	29 Aug	52 00	131 35	500	x	x	x			

TABULATED DATA: MV PIONEER

Station Data

Bathythermograph Observations

Plankton Data

MV PIONEER
STATION 1

54-18 N 160-00 W 18 MAY 1958 2000 GCT
WEATHER 02 CLOUDS 8 AMT 9 WIND 180 18 KTS SEA 4
SWELL 180 AMT 3 BAR 1012 MBS DRY 04.2 WET 03.3 BT 5

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	4.20	32.11	25.49	
9	5.42	32.11	25.36	.707
23	5.35	32.11	25.37	.667
46	5.67	32.51	25.65	.611
69	5.60	32.57	25.71	.606
93	5.30	32.74	25.87	.520
117	5.45	33.00	26.06	.431
141	5.52	33.12	26.15	.398
189	5.62	33.41	26.37	.300
238	5.31	33.73	26.66	.220
287	5.01	33.80	26.75	.184

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	4.20	32.11	25.49	249.7	0.000	
10	5.42	32.11	25.36	262.2	0.026	.705
20	5.37	32.11	25.37	261.8	0.052	.677
30	5.39	32.13	25.38	260.6	0.078	.651
50	5.67	32.51	25.65	235.4	0.128	.616
75	5.48	32.60	25.74	226.7	0.186	.585
100	5.35	32.83	25.94	208.3	0.240	.488
150	5.57	33.17	26.18	185.9	0.339	.378
200	5.55	33.50	26.45	161.6	0.426	.278
250	5.21	33.75	26.68	139.5	0.501	.208
300	4.98	33.82	26.76	132.1	0.569	.180

MV PIONEER
STATION 2

54-00 N 160-00 W 18 MAY 1958 2342 GCT
WEATHER 02 CLOUDS 8 AMT 9 WIND 180 12 KTS SEA 4
SWELL 180 AMT 3 BAR 1012 MBS DRY 04.4 WET 03.3 BT 6

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	4.40	32.65	25.90	
9	5.73	32.65	25.75	.634
23	5.73	32.65	25.75	.628
46	5.69	32.65	25.76	.624
69	5.42	32.65	25.79	.618
94	4.68	32.81	26.00	.590
117	5.15	33.12	26.19	.434
141	4.98	33.44	26.46	.341
189	5.02	33.81	26.75	.190
237	4.64	33.91	26.87	.127
286	4.08	33.95	26.97	.064

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
	0	4.40	32.65	25.90	210.9	0.000	
	10	5.73	32.65	25.75	225.2	0.022	.633
	20	5.73	32.65	25.75	225.3	0.045	.629
	30	5.74	32.65	25.75	225.5	0.068	.627
	50	5.67	32.64	25.75	225.7	0.113	.624
	75	5.12	32.67	25.84	217.5	0.168	.625
	100	4.86	32.89	26.04	198.5	0.220	.543
	150	5.02	33.53	26.53	152.7	0.308	.306
	200	4.95	33.84	26.78	129.3	0.378	.175
	250	4.48	33.92	26.90	118.6	0.440	.103
*	300	3.94	33.96	26.99	110.3	0.497	.060

MV PIONEER
STATION 3

52-36 N 178-58 W 27 MAY 1958 2035-2150 GCT
WEATHER 50 CLOUDS 7 AMT 9 WIND 095 05 KTS SEA 2
SWELL 100 AMT 1 BAR 0985 MBS DRY 05.3 WET 05.3 BT 9

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	4.10	33.12	26.30	
9	4.55	33.16	26.29	.622
23	4.50	33.16	26.30	.618
47	4.43	33.18	26.32	.606
71	4.24	33.21	26.36	.594
94	4.15	33.25	26.40	.583
118	3.90	33.30	26.47	.530
142	3.72	33.24	26.44	.504
191	3.60	33.31	26.50	.484
240	3.81	33.49	26.63	.386
289	3.83	33.63	26.74	.312
386	3.91	33.84	26.90	.179
484	3.74	34.01	27.05	.108
682	3.41	34.16	27.20	.056
1028	2.90	34.34	27.39	.046

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	4.10	33.12	26.30	172.6	0.000	
10	4.55	33.16	26.29	174.2	0.017	.622
20	4.51	33.16	26.29	173.8	0.034	.619
30	4.49	33.16	26.30	173.7	0.051	.614
50	4.40	33.18	26.32	171.5	0.086	.604
75	4.23	33.22	26.37	167.0	0.128	.595
100	4.08	33.27	26.43	161.9	0.169	.567
150	3.68	33.24	26.44	160.7	0.250	.506
200	3.65	33.35	26.53	152.5	0.328	.464
250	3.81	33.52	26.65	141.6	0.402	.371
300	3.85	33.66	26.76	131.9	0.470	.294
400	3.89	33.87	26.92	117.4	0.595	.167
500	3.71	34.02	27.06	105.1	0.706	.103
600	3.54	34.10	27.14	98.0	0.808	.073
700	3.38	34.17	27.21	91.9	0.903	.053
800	3.23	34.23	27.27	86.5	0.992	.041
1000	2.94	34.33	27.38	77.2	1.156	.043

MV PIONEER
STATION 4

53-00 N 180-00 28 MAY 1958 0651-0848 GCT
WEATHER 41 CLOUDS 7 AMT 9 WIND 065 10 KTS SEA 2
SWELL 070 AMT 1 BAR 0985 MBS DRY 04.7 WET 04.4 BT 11

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	3.20	33.17	26.43	
10	3.59	33.20	26.42	.659
25	3.65	33.20	26.41	.649
49	3.27	33.21	26.46	.643
74	3.02	33.25	26.51	.637
99	2.90	33.26	26.53	.632
123	2.82	33.30	26.57	.623
148	3.20	33.46	26.66	.453
389	3.55	34.09	27.13	.081
487	3.43	34.19	27.22	.063
684	3.25	34.28	27.31	.041
1030	2.65	34.44	27.49	.051

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	3.20	33.17	26.43	160.7	0.000	
10	3.59	33.20	26.42	161.9	0.016	.659
20	3.66	33.20	26.41	162.6	0.032	.652
30	3.56	33.20	26.42	161.8	0.048	.648
50	3.26	33.21	26.46	158.5	0.080	.643
75	3.01	33.25	26.51	153.4	0.119	.637
100	2.89	33.26	26.53	151.8	0.157	.635
150	3.22	33.47	26.67	139.1	0.230	.445
200	3.62	33.67	26.79	128.1	0.297	.277
250	3.85	33.84	26.90	118.0	0.359	.158
300	3.72	33.94	26.99	109.6	0.416	.123
400	3.54	34.10	27.14	96.6	0.519	.079
500	3.42	34.20	27.23	88.6	0.612	.061
600	3.34	34.24	27.27	85.5	0.699	.048
700	3.23	34.29	27.32	81.3	0.782	.040
800	3.09	34.33	27.36	77.6	0.861	.037
1000	2.72	34.43	27.48	67.4	1.006	.048

MV PIONEER
STATION 5

53-04 N 179-05 E 29 MAY 1958 0127 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 090 12 KTS SEA 2
SWELL 090 AMT 1 BAR 0987 MBS DRY 05.8 WET 05.3 BT 13

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	3.50	33.23	26.45	
9	3.82	33.20	26.40	.624
24	3.65	33.22	26.43	.640
48	3.50	33.22	26.44	.623
72	3.24	33.26	26.50	.610
96	3.05	33.28	26.53	.582
120	2.85	33.34	26.60	.536
144	3.35	33.49	26.67	.408
193	3.81	33.69	26.79	.251
242	3.85	33.84	26.90	.168
290	3.76	33.93	26.98	.116

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
	0	3.50	33.23	26.45	158.8	0.000	
	10	3.81	33.20	26.40	163.9	0.016	.626
	20	3.69	33.22	26.42	161.4	0.032	.638
	30	3.62	33.22	26.43	160.8	0.048	.635
	50	3.48	33.22	26.44	159.7	0.080	.622
	75	3.22	33.26	26.50	154.5	0.119	.607
	100	2.97	33.28	26.54	150.9	0.157	.580
	150	3.43	33.52	26.69	137.3	0.229	.385
	200	3.82	33.71	26.80	127.1	0.295	.237
	250	3.84	33.86	26.92	116.4	0.356	.156
*	300	3.73	33.94	26.99	109.7	0.413	.112

MV PIONEER
STATION 6

53-00 N 178-15 E 29 MAY 1958 0639-0756 GCT
WEATHER 43 CLOUDS - AMT - WIND 135 05 KTS SEA 0
SWELL 050 AMT 1 BAR 0988 MBS DRY 04.2 WET 04.2 BT 15

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	3.40	33.23	26.46	
10	3.77	33.23	26.42	.652
25	3.66	33.23	26.44	.643
49	3.52	33.23	26.45	.634
74	3.10	33.25	26.50	.634
98	2.97	33.27	26.53	.620
123	2.82	33.27	26.54	.597
147	2.87	33.38	26.63	.494
197	3.82	33.73	26.82	.219
246	3.81	33.86	26.92	.142
295	3.77	33.93	26.98	.104
387	3.65	34.05	27.09	.073
485	3.47	34.15	27.19	.051
680	3.21	34.25	27.29	.046
1021	2.72	34.39	27.45	.050

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	3.40	33.23	26.46	157.9	0.000	
10	3.77	33.23	26.42	161.3	0.016	.652
20	3.69	33.23	26.43	160.6	0.032	.646
30	3.65	33.23	26.44	160.3	0.048	.640
50	3.50	33.23	26.45	159.1	0.080	.634
75	3.09	33.25	26.50	154.1	0.119	.634
100	2.95	33.27	26.53	151.5	0.157	.621
150	2.95	33.41	26.64	141.2	0.230	.472
200	3.82	33.74	26.83	124.8	0.297	.213
250	3.81	33.87	26.93	115.4	0.357	.138
300	3.76	33.94	26.99	110.0	0.413	.102
400	3.62	34.07	27.11	99.6	0.518	.069
500	3.45	34.16	27.20	91.9	0.614	.050
600	3.32	34.21	27.25	87.5	0.704	.047
700	3.18	34.26	27.30	83.0	0.789	.046
800	3.04	34.30	27.35	79.3	0.870	.046
1000	2.75	34.38	27.43	71.4	1.021	.049

MV PIONEER
STATION 7

53-29 N 176-42 E 30 MAY 1958 0449 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 120 08 KTS SEA 3
SWELL 120 AMT 2 BAR 0989 MBS DRY 05.6 WET 04.7 BT 17

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	4.20	33.08	26.26	
10	4.55	33.06	26.21	.627
25	3.70	33.14	26.36	.652
49	3.32	33.16	26.41	.620
74	3.00	33.17	26.45	.647
98	2.84	33.20	26.49	.626
122	2.74	33.27	26.55	.566
146	2.75	33.33	26.60	.502
196	4.08	33.73	26.79	.224
245	3.93	33.87	26.92	.156
319	3.80	33.98	27.02	.143

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	4.20	33.08	26.26	176.6	0.000	
10	4.55	33.06	26.21	181.7	0.018	.627
20	3.93	33.12	26.32	171.2	0.036	.648
30	3.61	33.14	26.37	166.7	0.053	.641
50	3.30	33.16	26.41	162.6	0.086	.622
75	2.99	33.17	26.45	159.3	0.126	.647
100	2.83	33.21	26.50	155.1	0.165	.621
150	2.91	33.37	26.62	143.9	0.240	.472
200	4.07	33.74	26.80	127.3	0.308	.217
250	3.92	33.88	26.93	115.7	0.369	.152
300	3.82	33.96	27.00	109.1	0.425	.136

MV PIONEER
STATION 8

54-00 N 175-00 E 30 MAY 1958 1457-1605 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 045 05 KTS SEA 2
SWELL 050 AMT 1 BAR 0991 MBS DRY 04.4 WET 03.9 BT 19

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	3.20	33.18	26.44	
10	3.72	33.18	26.39	.651
25	3.62	33.15	26.38	.655
50	3.54	33.15	26.38	.646
74	2.96	33.21	26.48	.641
99	2.82	33.24	26.52	.620
123	2.34	33.28	26.59	.581
148	3.07	33.45	26.67	.447
197	3.75	33.76	26.85	.206
246	3.87	33.89	26.94	.115
295	3.84	33.98	27.01	.101
387	3.65	34.09	27.12	.061
485	3.48	34.18	27.21	.047
682	3.22	34.28	27.31	.045
1026	2.76	34.41	27.46	.048

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	3.20	33.18	26.44	159.9	0.000	
10	3.72	33.18	26.39	164.6	0.016	.651
20	3.65	33.16	26.38	165.6	0.033	.654
30	3.65	33.14	26.37	167.1	0.050	.653
50	3.54	33.15	26.38	165.5	0.083	.646
75	2.96	33.21	26.48	156.0	0.123	.641
100	2.78	33.24	26.52	152.4	0.162	.620
150	3.11	33.47	26.68	138.1	0.235	.434
200	3.76	33.77	26.85	122.0	0.300	.198
250	3.87	33.90	26.95	113.7	0.359	.114
300	3.83	33.99	27.02	107.0	0.414	.098
400	3.63	34.10	27.13	97.5	0.516	.059
500	3.46	34.19	27.22	89.8	0.610	.047
600	3.33	34.24	27.27	85.4	0.698	.045
700	3.20	34.29	27.32	81.0	0.781	.045
800	3.06	34.33	27.37	77.2	0.860	.045
1000	2.79	34.40	27.45	70.4	1.008	.047

MV PIONEER
STATION 9

54-33 N 174-27 E 30 MAY 1958 2200 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 045 05 KTS SEA 2
SWELL 050 AMT 2 BAR 0992 MBS DRY 05.6 WET 04.7 BT 21

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	3.30	33.15	26.41	
10	3.44	33.16	26.40	.658
25	3.20	33.17	26.43	.652
49	3.06	33.19	26.46	.642
74	2.84	33.19	26.48	.651
98	2.52	33.22	26.53	.641
123	1.88	33.23	26.59	.602
147	2.89	33.47	26.70	.413
197	3.80	33.85	26.91	.153
246	3.84	33.92	26.97	.101
320	3.75	34.02	27.05	.061

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	3.30	33.15	26.41	163.1	0.000	
10	3.44	33.16	26.40	163.6	0.016	.658
20	3.27	33.17	26.42	161.4	0.032	.654
30	3.18	33.18	26.44	159.9	0.048	.648
50	3.05	33.19	26.46	158.2	0.080	.643
75	2.83	33.19	26.48	156.4	0.119	.651
100	2.41	33.21	26.53	151.6	0.158	.644
150	2.97	33.50	26.71	134.6	0.230	.391
200	3.80	33.85	26.91	116.4	0.293	.149
250	3.84	33.93	26.97	111.2	0.350	.098
300	3.79	33.99	27.03	106.6	0.404	.067

MV PIONEER
STATION 10

55-00 N 174-00 E 31 MAY 1958 0327-0448 GCT
WEATHER 51 CLOUDS 7 AMT 9 WIND 360 15 KTS SEA 3
SWELL 360 AMT 3 BAR 0991 MBS DRY 03.3 WET 02.8 BT 23

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	2.70	33.22	26.51	
10	3.08	33.22	26.48	.667
24	2.90	33.22	26.50	.670
48	2.72	33.22	26.51	.678
72	2.58	33.22	26.52	.668
96	2.35	33.22	26.54	.663
120	2.22	33.23	26.56	.657
144	1.42	33.23	26.62	.629
192	3.65	33.78	26.87	.158
240	3.70	33.90	26.96	.106
289	3.67	33.97	27.02	.075
372	3.55	34.07	27.11	.056
470	3.42	34.16	27.20	.047
661	3.22	34.25	27.29	.038
998	2.76	34.37	27.43	.041

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
	0	2.70	33.22	26.51	152.8	0.000	
	10	3.08	33.22	26.48	155.9	0.015	.667
	20	2.95	33.22	26.49	154.9	0.031	.669
	30	2.85	33.22	26.50	154.1	0.046	.674
	50	2.71	33.22	26.51	153.1	0.077	.677
	75	2.55	33.22	26.53	151.9	0.115	.667
	100	2.37	33.22	26.54	150.6	0.153	.664
	150	1.82	33.32	26.66	139.0	0.225	.547
	200	3.66	33.80	26.89	118.8	0.289	.148
	250	3.70	33.91	26.97	111.3	0.347	.098
	300	3.65	33.98	27.03	105.9	0.401	.072
	400	3.51	34.10	27.14	96.2	0.502	.053
	500	3.39	34.18	27.22	89.8	0.595	.045
	600	3.29	34.22	27.26	86.5	0.683	.040
	700	3.12	34.28	27.32	80.9	0.767	.039
	800	2.92	34.33	27.38	75.8	0.845	.040
*	1000	2.76	34.37	27.43	72.3	0.993	.041

MV PIONEER
STATION 11

54-30 N 173-33 E 01 JUN 1958 0012 GCT
WEATHER 01 CLOUDS 6 AMT 6 WIND 270 05 KTS SEA 1
SWELL 320 AMT 1 BAR 0992 MBS DRY 05.5 WET 04.7 BT 25

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	3.20	33.15	26.41	
9	3.76	33.12	26.34	.636
23	3.45	33.13	26.38	.662
47	3.12	33.17	26.44	.635
71	2.82	33.17	26.46	.631
95	2.61	33.20	26.51	.595
121	2.15	33.27	26.60	.591
143	2.58	33.40	26.67	.464
192	3.41	33.78	26.90	.183
241	3.42	33.89	26.98	.117
315	3.58	34.01	27.06	.068

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	3.20	33.15	26.41	162.2	0.000	
10	3.73	33.12	26.34	169.2	0.017	.639
20	3.51	33.13	26.37	166.5	0.034	.659
30	3.35	33.15	26.40	163.7	0.051	.652
50	3.08	33.17	26.44	159.9	0.083	.636
75	2.80	33.17	26.47	157.7	0.123	.623
100	2.44	33.21	26.53	151.9	0.162	.607
150	2.75	33.47	26.71	135.0	0.234	.411
200	3.41	33.80	26.91	116.4	0.297	.170
250	3.43	33.91	27.00	108.6	0.353	.108
300	3.53	33.99	27.05	104.0	0.406	.073

MV PIONEER
STATION 12

54-00 N 173-00 E 01 JUN 1958 0554-0705 GCT
WEATHER 02 CLOUDS 8 AMT 9 WIND 315 05 KTS SEA 1
SWELL 320 AMT 1 BAR 0996 MBS DRY 04.4 WET 03.6 BT 27

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	3.50	33.09	26.34	
10	4.02	33.09	26.29	.645
25	3.66	33.09	26.32	.647
50	3.25	33.09	26.36	.636
75	2.97	33.11	26.40	.642
99	2.48	33.19	26.51	.597
124	2.30	33.30	26.61	.527
149	2.53	33.47	26.73	.445
198	3.35	33.78	26.90	.163
248	3.58	33.92	26.99	.143
297	3.61	34.02	27.07	.062
394	3.38	34.10	27.15	.055
493	3.30	34.16	27.21	.053
690	3.14	34.28	27.32	.041
1039	2.68	34.40	27.46	.045

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	3.50	33.09	26.34	169.3	0.000	
10	4.02	33.09	26.29	174.2	0.017	.645
20	3.77	33.09	26.31	171.9	0.034	.647
30	3.57	33.09	26.33	170.2	0.051	.643
50	3.25	33.09	26.36	167.4	0.085	.636
75	2.97	33.11	26.40	163.7	0.126	.642
100	2.46	33.19	26.51	153.5	0.166	.594
150	2.55	33.48	26.73	132.6	0.238	.437
200	3.36	33.79	26.91	116.6	0.300	.163
250	3.58	33.92	26.99	109.3	0.356	.139
300	3.60	34.02	27.07	102.4	0.409	.062
400	3.38	34.10	27.15	95.0	0.508	.055
500	3.30	34.16	27.21	90.4	0.601	.052
600	3.22	34.23	27.27	85.0	0.689	.045
700	3.13	34.29	27.33	80.3	0.772	.041
800	3.02	34.33	27.37	76.8	0.851	.039
1000	2.74	34.39	27.44	70.6	0.998	.043

MV PIONEER
STATION 13

53-29 N 172-29 E 02 JUN 1958 0223 GCT
WEATHER 02 CLOUDS 8 AMT 9 WIND 260 15 KTS SEA 3
SWELL 260 AMT 4 BAR 1102 MBS DRY 05.0 WET 03.9 BT 29

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	3.90	33.05	26.27	
10	4.18	33.05	26.24	.652
24	4.12	33.05	26.25	.646
48	3.78	33.05	26.28	.642
72	3.52	33.10	26.35	.619
96	2.72	33.14	26.45	.631
121	2.30	33.21	26.54	.596
145	3.12	33.49	26.69	.386
194	3.85	33.87	26.93	.123
244	3.58	33.93	27.00	.102
31[illegible]	3.35	33.96	27.05	.080

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	10⁵δ	Δ D	OXY
0	3.90	33.05	26.27	176.0	0.000	
10	4.18	33.05	26.24	178.8	0.018	.652
20	4.15	33.05	26.24	178.5	0.036	.647
30	4.03	33.05	26.26	177.5	0.054	.647
50	3.78	33.05	26.28	175.2	0.089	.639
75	3.40	33.10	26.36	168.1	0.132	.623
100	2.57	33.14	26.46	158.2	0.173	.638
150	3.24	33.54	26.72	134.0	0.246	.348
200	3.81	33.88	26.94	114.2	0.308	.120
250	3.55	33.94	27.01	107.5	0.363	.100
300	3.39	33.96	27.04	104.8	0.416	.084

MV PIONEER
STATION 14

53-00 N 172-00 E 02 JUN 1958 0817-0917 GCT
WEATHER 02 CLOUDS 8 AMT 9 WIND 260 10 KTS SEA 1
SWELL 260 AMT 1 BAR 1000 MBS DRY 04.4 WET 03.1 BT 31

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	3.60	33.05	26.30	
10	4.52	33.04	26.20	.611
24	4.33	33.05	26.23	.634
49	3.79	33.06	26.29	.602
74	3.34	33.12	26.38	.566
99	3.44	33.30	26.51	.412
123	3.70	33.50	26.65	.346
148	4.00	33.63	26.72	.274
198	4.10	33.77	26.82	.178
248	4.08	33.92	26.94	.105
298	3.88	33.97	27.00	.083
394	3.86	34.04	27.06	.062
494	3.68	34.15	27.16	.042
594	3.53	34.21	27.23	.041
644	3.48	34.22	27.24	.044

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	3.60	33.05	26.30	173.3	0.000	
10	4.52	33.04	26.20	182.9	0.018	.611
20	4.39	33.05	26.22	180.9	0.036	.630
30	4.19	33.05	26.24	179.0	0.054	.627
50	3.76	33.06	26.29	174.3	0.089	.603
75	3.34	33.13	26.39	165.4	0.131	.558
100	3.45	33.31	26.52	152.9	0.171	.409
150	4.01	33.64	26.73	133.8	0.243	.270
200	4.10	33.78	26.83	124.7	0.308	.174
250	4.07	33.92	26.94	114.3	0.368	.104
300	3.88	33.97	27.00	109.0	0.424	.083
400	3.85	34.05	27.07	103.5	0.530	.060
500	3.67	34.16	27.17	94.2	0.629	.042
600	3.52	34.21	27.23	89.6	0.721	.041

MV PIONEER
STATION 15

52-30 N 172-00 E 03 JUN 1958 0005 GCT
WEATHER 03 CLOUDS 8 AMT 6 WIND 030 04 KTS SEA 1
SWELL 360 AMT 1 BAR 0996 MBS DRY 06.4 WET 04.4 BT 33

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	4.80	32.99	26.13	
10	4.78	32.97	26.11	.617
24	4.41	33.00	26.18	.618
48	3.50	33.10	26.35	.627
72	3.10	33.12	26.40	.615
97	2.70	33.14	26.45	.604
121	3.45	33.43	26.61	.393
145	3.81	33.68	26.78	.239
195	4.05	33.93	26.95	.107
244	3.98	33.96	26.98	.070
319	3.63	34.03	27.07	.056

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	4.80	32.99	26.13	189.4	0.000	
10	4.78	32.97	26.11	190.8	0.019	.617
20	4.53	32.99	26.16	186.8	0.038	.617
30	4.13	33.03	26.23	179.9	0.056	.622
50	3.47	33.10	26.35	168.6	0.091	.626
75	2.99	33.11	26.40	163.8	0.133	.625
100	2.82	33.18	26.47	157.2	0.173	.575
150	3.85	33.71	26.80	127.0	0.244	.222
200	4.05	33.93	26.95	112.9	0.304	.102
250	3.96	33.96	26.99	110.1	0.360	.067
300	3.75	34.01	27.05	104.7	0.414	.055

MV PIONEER
STATION 16

52-22 N 173-00 E 07 JUN 1958 2337 GCT
WEATHER 02 CLOUDS 8 AMT 9 WIND 070 04 KTS SEA 0
SWELL 070 AMT 1 BAR 1015 MBS DRY 08.6 WET 06.1 BT 35

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	5.60	32.97	26.02	
10	5.09	32.96	26.07	.641
25	5.00	32.95	26.07	.640
50	4.81	32.97	26.11	.634
104	3.83	33.34	26.51	.499
145	3.95	33.57	26.68	.331
202	4.08	33.79	26.84	.193

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	5.60	32.97	26.02	199.6	0.000	
10	5.09	32.96	26.07	194.8	0.020	.641
20	5.03	32.95	26.07	195.0	0.039	.641
30	4.98	32.95	26.08	194.6	0.058	.642
50	4.81	32.97	26.11	191.5	0.097	.634
75	4.20	33.15	26.32	171.9	0.142	.584
100	3.86	33.32	26.49	156.0	0.183	.512
150	3.94	33.59	26.69	137.1	0.256	.314
200	4.08	33.78	26.83	124.5	0.321	.196

MV PIONEER
STATION 17

51-35 N 173-00 E 08 JUN 1958 0554-0655 GCT
WEATHER 02 CLOUDS 8 AMT 9 WIND 045 12 KTS SEA 1
SWELL 050 AMT 1 BAR 1015 MBS DRY 05.3 WET 03.9 BT 37

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	4.60	33.08	26.22	
9	4.66	33.06	26.20	.652
24	4.41	33.06	26.23	.647
49	3.65	33.08	26.32	.636
74	3.45	33.11	26.36	.609
98	3.36	33.27	26.50	.522
123	3.79	33.40	26.56	.418
148	4.10	33.49	26.60	.344
198	4.25	33.63	26.69	.265
248	4.28	33.77	26.80	.197
298	4.22	33.86	26.88	.150
393	4.02	33.97	26.99	.087
491	3.90	34.07	27.08	.058
690	3.64	34.17	27.18	.042
1040	3.15	34.31	27.34	.041

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	4.60	33.08	26.22	180.6	0.000	
10	4.65	33.06	26.20	182.7	0.018	.652
20	4.49	33.06	26.22	181.2	0.036	.648
30	4.18	33.06	26.25	178.2	0.054	.646
50	3.64	33.08	26.32	171.7	0.089	.636
75	3.44	33.12	26.37	167.0	0.131	.606
100	3.40	33.28	26.50	154.7	0.171	.513
150	4.11	33.50	26.61	145.3	0.246	.341
200	4.25	33.64	26.70	136.7	0.317	.262
250	4.28	33.77	26.80	127.7	0.383	.195
300	4.21	33.86	26.88	120.7	0.445	.148
400	4.01	33.98	27.00	110.4	0.561	.084
500	3.89	34.07	27.08	103.3	0.668	.057
600	3.76	34.13	27.14	98.2	0.769	.048
700	3.63	34.17	27.19	94.5	0.865	.041
800	3.49	34.22	27.24	90.0	0.957	.038
1000	3.21	34.30	27.33	82.4	1.129	.039

MV PIONEER
STATION 18

51-17 N 178-35 E 11 JUN 1958 0030 GCT
WEATHER 02 CLOUDS 8 AMT 9 WIND 315 10 KTS SEA 1
SWELL 320 AMT 1 BAR 1004 MBS DRY 06.9 WET 05.8 BT 42

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	5.20	32.82	25.95	
10	5.48	32.85	25.94	.616
25	4.98	33.07	26.17	.581
49	4.56	33.16	26.29	.558
74	4.35	33.29	26.41	.479
99	4.26	33.35	26.47	.447
123	4.10	33.41	26.53	.429
148	4.09	33.46	26.58	.408
198	4.10	33.55	26.65	.346
247	4.15	33.76	26.81	.220
321	4.04	33.90	26.93	.142

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	5.20	32.82	25.95	206.4	0.000	
10	5.48	32.85	25.94	207.3	0.021	.616
20	5.13	33.01	26.11	191.6	0.041	.591
30	4.87	33.09	26.20	182.9	0.060	.580
50	4.55	33.17	26.30	173.8	0.096	.554
75	4.35	33.29	26.41	162.9	0.138	.477
100	4.25	33.35	26.47	157.6	0.178	.446
150	4.09	33.46	26.58	148.1	0.254	.407
200	4.10	33.56	26.65	141.1	0.326	.340
250	4.15	33.77	26.82	126.3	0.393	.214
300	4.09	33.88	26.91	117.9	0.454	.150

MV PIONEER
STATION 19

51-00 N 179-00 E 11 JUN 1958 0436-0622 GCT
WEATHER 03 CLOUDS 6 AMT 4 WIND 315 18 KTS SEA 3
SWELL 320 AMT 4 BAR 1003 MBS DRY 05.6 WET 04.7 BT 44

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	5.00	32.72	25.89	
9	5.68	32.72	25.81	.627
24	5.59	32.72	25.82	.629
48	5.34	32.73	25.86	.623
72	4.63	32.83	26.02	.614
96	3.47	33.10	26.35	.593
120	3.25	33.22	26.47	.525
144	3.68	33.52	26.66	.346
193	3.76	33.83	26.90	.156
242	3.56	33.92	26.99	.139
292	3.55	33.99	27.05	.097
376	3.50	34.08	27.13	.067
473	3.60	34.18	27.20	.045
669	3.32	34.29	27.31	.038
912	2.91	34.38	27.42	.039

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	5.00	32.72	25.89	211.8	0.000	
10	5.68	32.72	25.81	219.3	0.022	.627
20	5.62	32.72	25.82	218.8	0.044	.629
30	5.57	32.71	25.82	219.0	0.066	.628
50	5.30	32.73	25.87	214.8	0.109	.623
75	4.43	32.87	26.07	195.3	0.160	.614
100	3.39	33.11	26.37	167.5	0.205	.589
150	3.70	33.57	26.70	136.1	0.281	.313
200	3.72	33.84	26.91	116.3	0.344	.155
250	3.56	33.93	27.00	108.4	0.400	.131
300	3.54	34.00	27.06	103.3	0.453	.094
400	3.54	34.11	27.15	95.8	0.553	.060
500	3.56	34.20	27.22	90.1	0.646	.044
600	3.42	34.25	27.27	85.6	0.734	.040
700	3.26	34.30	27.32	80.9	0.817	.038
800	3.09	34.34	27.37	76.8	0.896	.038
1000	2.78	34.41	27.46	69.5	1.042	.040

MV PIONEER
STATION 20

52-42 N 178-51 W 16 JUN 1958 2310 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 135 08 KTS SEA 1
SWELL 140 AMT 1 BAR 1011 MBS DRY 10.6 WET 08.9 BT 47

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	5.50	33.15	26.17	
10	5.72	33.14	26.14	.403
25	5.15	33.15	26.22	.530
50	4.95	33.16	26.25	.618
75	4.22	33.19	26.35	.584
100	4.07	33.22	26.39	.561
125	4.02	33.26	26.42	.539
150	3.82	33.28	26.46	.552
200	3.61	33.33	26.52	.479
250	3.68	33.42	26.58	.438
325	3.89	33.66	26.75	.286

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	5.50	33.15	26.17	185.0	0.000	
10	5.72	33.14	26.14	188.3	0.019	.403
20	5.30	33.15	26.20	182.9	0.038	.494
30	5.15	33.15	26.22	181.4	0.056	.557
50	4.95	33.16	26.25	178.7	0.092	.618
75	4.22	33.19	26.35	169.1	0.135	.584
100	4.07	33.22	26.39	165.6	0.177	.561
150	3.82	33.28	26.46	159.0	0.258	.552
200	3.61	33.33	26.52	153.6	0.336	.479
250	3.68	33.42	26.58	147.8	0.411	.438
300	3.81	33.57	26.69	138.2	0.483	.349

MV PIONEER
STATION 21

53-00 N 180-00 17 JUN 1958 0616-0718 GCT
WEATHER 47 CLOUDS - AMT - WIND --- 00 KTS SEA 0
SWELL - AMT 0 BAR 1012 MBS DRY 06.7 WET 06.4 BT 49

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	5.10	33.16	26.23	
10	4.95	33.15	26.24	.679
25	4.62	33.15	26.27	.664
50	3.38	33.17	26.41	.651
75	3.16	33.21	26.47	.632
100	3.00	33.26	26.52	.628
116	3.37	33.28	26.50	.627
174	3.78	33.47	26.61	.496
246	3.86	33.83	26.89	.415
300	3.65	33.87	26.95	.179
392	3.61	34.02	27.07	.189
489	3.57	34.10	27.14	.092
684	3.33	34.21	27.25	.058
914	2.90	34.34	27.39	.049

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
	0	5.10	33.16	26.23	179.8	0.000	
	10	4.95	33.15	26.24	179.1	0.018	.679
	20	4.76	33.15	26.26	177.2	0.036	.668
	30	4.29	33.15	26.31	172.5	0.053	.662
	50	3.38	33.17	26.41	162.6	0.087	.651
	75	3.16	33.21	26.47	157.7	0.127	.632
	100	3.00	33.26	26.52	152.7	0.166	.628
	150	3.65	33.38	26.56	149.9	0.242	.543
	200	3.86	33.64	26.74	132.7	0.313	.498
	250	3.84	33.83	26.89	118.7	0.376	.391
	300	3.65	33.87	26.95	114.1	0.434	.179
	400	3.61	34.03	27.08	102.5	0.542	.179
	500	3.56	34.11	27.14	96.8	0.642	.089
	600	3.45	34.16	27.20	92.6	0.737	.070
	700	3.30	34.22	27.26	87.3	0.827	.057
	800	3.11	34.27	27.31	82.2	0.912	.051
*	1000	2.75	34.39	27.44	70.7	1.065	.051

MV PIONEER
STATION 22

53-32 N 180-00 17 JUN 1958 2340 GCT
WEATHER 40 CLOUDS 6 AMT 9 WIND --- 00 KTS SEA 0
SWELL - AMT 0 BAR 1014 MBS DRY 08.6 WET 07.5 BT 51

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	5.90	33.18	26.15	
10	5.30	33.17	26.21	.652
25	4.60	33.16	26.28	.652
50	3.44	33.21	26.44	.643
74	3.10	33.23	26.49	.633
99	2.82	33.29	26.56	.595
124	2.68	33.31	26.59	.562
149	3.05	33.44	26.66	.450
198	3.78	33.76	26.85	.219
248	3.80	33.86	26.92	.173
322	3.70	33.98	27.03	.096

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	5.90	33.18	26.15	187.3	0.000	
10	5.30	33.17	26.21	181.3	0.018	.652
20	4.83	33.16	26.26	177.1	0.036	.652
30	4.30	33.17	26.32	171.1	0.053	.650
50	3.44	33.21	26.44	160.1	0.086	.643
75	3.09	33.23	26.49	155.6	0.125	.631
100	2.80	33.29	26.56	148.8	0.163	.595
150	3.07	33.45	26.67	139.3	0.235	.443
200	3.78	33.76	26.85	122.9	0.301	.217
250	3.80	33.86	26.92	116.0	0.361	.171
300	3.75	33.95	27.00	109.2	0.417	.120

MV PIONEER
STATION 23

54-00 N 180-00 18 JUN 1958 0448 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND --- 00 KTS SEA 0
SWELL - AMT 0 BAR 1013 MBS DRY 12.2 WET 10.3 BT 53

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.10	33.22	26.16	
10	4.98	33.21	26.28	.653
24	4.42	33.22	26.35	.663
49	4.04	33.22	26.39	.653
74	3.29	33.24	26.48	.618
98	3.03	33.30	26.55	.531
123	2.96	33.34	26.59	.539
147	3.28	33.48	26.67	.413
172	3.65	33.63	26.75	.305
196	3.78	33.75	26.84	.225
246	3.70	33.93	26.99	.123

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	6.10	33.22	26.16	186.7	0.000	
10	4.98	33.21	26.28	174.9	0.018	.653
20	4.55	33.22	26.34	169.7	0.035	.661
30	4.36	33.22	26.36	167.9	0.052	.663
50	4.00	33.22	26.39	164.5	0.085	.653
75	3.28	33.24	26.48	156.5	0.125	.613
100	3.01	33.30	26.55	149.8	0.163	.537
150	3.34	33.50	26.68	137.9	0.235	.399
200	3.79	33.77	26.85	122.3	0.300	.214

MV PIONEER
STATION 24

54-25 N 179-00 E 19 JUN 1958 0103 GCT
WEATHER 02 CLOUDS 1 AMT 1 WIND 045 15 KTS SEA 3
SWELL - AMT 0 BAR 1014 MBS DRY 07.5 WET 05.8 BT 55

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	5.80	33.22	26.19	
9	5.35	33.20	26.23	.658
23	4.65	33.21	26.32	.664
47	4.52	33.21	26.33	.656
70	3.27	33.21	26.46	.618
94	2.98	33.25	26.51	.614
118	2.95	33.33	26.58	.542
141	3.16	33.46	26.67	.444
188	3.77	33.73	26.82	.235
235	3.76	33.87	26.93	.153
306	3.68	33.96	27.01	.102

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	5.80	33.22	26.19	183.1	0.000	
10	5.27	33.20	26.24	178.8	0.018	.659
20	4.72	33.21	26.31	172.2	0.036	.663
30	4.60	33.21	26.32	171.1	0.053	.665
50	4.30	33.21	26.36	168.2	0.087	.649
75	3.19	33.21	26.46	158.0	0.128	.623
100	2.95	33.26	26.52	152.3	0.167	.599
150	3.32	33.52	26.70	136.3	0.239	.394
200	3.77	33.77	26.85	122.1	0.304	.210
250	3.75	33.90	26.96	112.5	0.363	.135
300	3.69	33.96	27.01	107.8	0.418	.103

MV PIONEER
STATION 25

54-43 N 178-14 E 19 JUN 1958 0633-0734 GCT
WEATHER 03 CLOUDS 8 AMT 7 WIND 010 10 KTS SEA 3
SWELL - AMT 0 BAR 1013 MBS DRY 05.8 WET 05.0 BT 57

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	4.90	33.25	26.32	
10	4.70	33.25	26.34	.676
25	4.20	33.24	26.39	.652
50	3.25	33.24	26.48	.642
75	2.99	33.26	26.52	.636
100	2.96	33.29	26.55	
125	3.02	33.39	26.62	.474
150	3.42	33.64	26.78	.312
200	3.62	33.79	26.88	.203
250	3.69	33.89	26.96	.124
300	3.69	33.97	27.02	.087
390	3.52	34.06	27.11	.083
490	3.45	34.13	27.17	.064
690	3.18	34.25	27.29	.046
1039	2.72	34.38	27.44	.049

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	4.90	33.25	26.32	170.9	0.000	
10	4.70	33.25	26.34	168.9	0.017	.676
20	4.37	33.24	26.37	166.4	0.034	.659
30	3.95	33.24	26.42	162.4	0.050	.650
50	3.25	33.24	26.48	156.1	0.082	.642
75	2.99	33.26	26.52	152.5	0.121	.636
100	2.96	33.29	26.55	150.1	0.159	
150	3.42	33.64	26.78	128.1	0.229	.312
200	3.62	33.79	26.88	119.1	0.291	.203
250	3.69	33.89	26.96	112.7	0.349	.124
300	3.69	33.97	27.02	107.0	0.404	.087
400	3.51	34.07	27.12	98.5	0.507	.081
500	3.44	34.14	27.18	93.3	0.603	.063
600	3.30	34.20	27.24	88.1	0.694	.052
700	3.17	34.26	27.30	82.9	0.779	.045
800	3.03	34.30	27.35	79.1	0.860	.042
1000	2.77	34.37	27.43	72.4	1.012	.046

MV PIONEER
STATION 26

54-02 N 177-15 E 23 JUN 1958 0525 GCT
WEATHER 41 CLOUDS 8 AMT 9 WIND 245 12 KTS SEA 4
SWELL 250 AMT 2 BAR 1005 MBS DRY 05.6 WET 05.3 BT 60

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	4.50	33.12	26.26	
10	4.98	33.12	26.21	.647
25	4.89	33.13	26.23	.649
49	3.37	33.13	26.38	.643
74	3.06	33.17	26.44	.636
98	2.88	33.24	26.51	.602
123	2.94	33.35	26.60	.513
147	3.34	33.44	26.63	.425
197	4.10	33.77	26.82	.218

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
	0	4.50	33.12	26.26	176.6	0.000	
	10	4.98	33.12	26.21	181.6	0.018	.647
	20	4.99	33.13	26.22	181.1	0.036	.649
	30	4.47	33.13	26.27	175.8	0.054	.648
	50	3.36	33.13	26.38	165.4	0.088	.643
	75	3.05	33.17	26.44	159.8	0.129	.636
	100	2.87	33.25	26.52	152.4	0.168	.595
	150	3.47	33.46	26.64	142.1	0.242	.404
*	200	4.05	33.79	26.84	123.4	0.308	.215

MV PIONEER
STATION 27

53-02 N 175-00 E 23 JUN 1958 2055 GCT
WEATHER 02 CLOUDS 8 AMT 9 WIND 225 16 KTS SEA 4
SWELL 230 AMT 3 BAR 0999 MBS DRY 05.8 WET 05.3 BT 64

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	4.60	33.13	26.26	
10	5.35	33.10	26.15	.628
25	5.21	33.10	26.17	.627
49	4.50	33.11	26.26	.625
74	4.13	33.20	26.37	.577
98	3.54	33.22	26.44	.574
123	3.32	33.28	26.51	.534
147	3.68	33.38	26.55	.466
196	3.88	33.57	26.68	.324
246	4.00	33.71	26.78	.231
320	3.90	33.90	26.94	.130

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	4.60	33.13	26.26	176.8	0.000	
10	5.35	33.10	26.15	187.2	0.018	.628
20	5.28	33.10	26.16	186.5	0.037	.627
30	5.03	33.10	26.19	183.9	0.056	.630
50	4.49	33.11	26.26	177.6	0.092	.622
75	4.10	33.20	26.37	167.2	0.135	.578
100	3.50	33.22	26.44	160.2	0.176	.572
150	3.69	33.39	26.56	149.5	0.253	.456
200	3.90	33.58	26.69	137.6	0.325	.316
250	4.00	33.72	26.79	128.5	0.392	.224
300	3.96	33.85	26.90	118.8	0.454	.153

MV PIONEER
STATION 28

51-30 N 173-57 E 28 JUN 1958 0750 GCT
WEATHER 02 CLOUDS 8 AMT 9 WIND 225 28 KTS SEA 4
SWELL 230 AMT 5 BAR 1000 MBS DRY 06.9 WET 06.1 BT 69

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.20	33.01	25.98	
9	6.82	33.02	25.91	.614
23	6.80	33.02	25.91	.623
45	4.75	33.03	26.17	.638
68	4.02	33.09	26.29	.634
91	3.90	33.13	26.33	.598
114	3.69	33.27	26.46	.513
136	3.70	33.37	26.54	.457
182	3.90	33.57	26.68	.316
226	4.01	33.74	26.81	.213
297	4.05	33.90	26.93	.118

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
	0	6.20	33.01	25.98	203.6	0.000	
	10	6.82	33.02	25.91	210.6	0.021	.615
	20	6.80	33.02	25.91	210.5	0.042	.621
	30	6.65	33.02	25.93	208.7	0.063	.630
	50	4.54	33.04	26.20	183.4	0.102	.640
	75	3.99	33.09	26.29	174.4	0.147	.628
	100	3.79	33.19	26.39	165.1	0.189	.562
	150	3.77	33.43	26.58	147.2	0.267	.410
	200	3.95	33.65	26.74	132.9	0.337	.270
	250	4.03	33.78	26.84	124.3	0.401	.181
*	300	4.05	33.91	26.94	115.2	0.461	.114

MV PIONEER
STATION 29

51-15 N 176-25 E 28 JUN 1958 2206 GCT
WEATHER 02 CLOUDS 8 AMT 9 WIND 225 16 KTS SEA 3
SWELL 230 AMT 4 BAR 1002 MBS DRY 08.1 WET 06.7 BT 73

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.10	32.83	25.85	
9	6.52	32.81	25.78	.613
23	6.46	32.80	25.78	.622
46	4.72	32.89	26.06	.633
69	3.55	33.06	26.31	.619
93	3.13	33.21	26.47	.574
117	3.25	33.35	26.57	.475
141	3.60	33.61	26.74	.281
190	3.48	33.84	26.94	.174
238	3.55	33.93	27.00	.110
311	3.54	34.03	27.08	.080

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	6.10	32.83	25.85	215.9	0.000	
10	6.54	32.81	25.78	222.8	0.022	.614
20	6.54	32.80	25.77	223.7	0.044	.620
30	5.87	32.82	25.87	214.2	0.066	.628
50	4.46	32.92	26.11	191.6	0.107	.633
75	3.39	33.10	26.36	168.1	0.152	.613
100	3.14	33.24	26.49	155.4	0.192	.555
150	3.56	33.66	26.79	127.9	0.263	.258
200	3.50	33.86	26.95	112.7	0.323	.158
250	3.56	33.95	27.02	06.9	0.378	.099
300	3.55	34.02	27.07	01.9	0.430	.079

MV PIONEER
STATION 30

51-13 N 178-23 E 29 JUN 1958 0833 GCT
WEATHER 02 CLOUDS 8 AMT 9 WIND 225 10 KTS SEA 3
SWELL 230 AMT 1 BAR 1004 MBS DRY 06.7 WET 05.8 BT 76

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	5.90	32.90	25.93	
10	6.49	32.89	25.85	.562
25	5.06	33.11	26.19	.480
49	4.92	33.12	26.22	.440
73	4.84	33.13	26.23	.490
98	4.78	33.22	26.31	.482
123	4.60	33.27	26.37	.470
147	4.42	33.32	26.43	.409
196	4.28	33.40	26.51	.357
246	4.22	33.56	26.64	.315
320	4.45	33.90	26.89	.130

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	5.90	32.90	25.93	208.3	0.000	
10	6.49	32.89	25.85	216.2	0.021	.562
20	5.42	33.05	26.11	191.8	0.041	.502
30	5.03	33.11	26.20	183.1	0.060	.464
50	4.92	33.12	26.22	181.4	0.096	.443
75	4.84	33.14	26.24	179.3	0.141	.490
100	4.77	33.22	26.31	172.8	0.185	.483
150	4.41	33.32	26.43	161.9	0.269	.405
200	4.27	33.41	26.52	154.1	0.348	.356
250	4.22	33.58	26.66	141.3	0.422	.309
300	4.35	33.80	26.82	126.6	0.489	.194

MV PIONEER
STATION 31

50-00 N 180-00 29 JUN 1958 2230-2341 GCT
WEATHER 01 CLOUDS 8 AMT 8 WIND 270 14 KTS SEA 3
SWELL 270 AMT 2 BAR 1008 MBS DRY 08.1 WET 06.9 BT 80

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	5.90	32.81	25.86	
10	6.32	32.80	25.80	.620
24	6.31	32.80	25.80	.617
48	4.62	32.94	26.11	.636
73	4.05	32.98	26.20	.643
97	3.43	33.01	26.28	.642
121	3.32	33.37	26.58	.455
145	3.30	33.68	26.83	.260
193	3.21	33.82	26.95	.184
241	3.60	33.98	27.04	.085
290	3.43	34.05	27.11	.078
374	3.45	34.14	27.18	.057
466	3.27	34.21	27.25	.056
655	3.20	34.32	27.35	.036
1000	2.67	34.43	27.48	.047

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	5.90	32.81	25.86	215.0	0.000	
10	6.32	32.80	25.80	220.8	0.022	.620
20	6.31	32.80	25.80	220.9	0.044	.617
30	6.30	32.84	25.83	217.8	0.066	.623
50	4.58	32.94	26.11	191.4	0.107	.637
75	3.98	32.97	26.20	183.3	0.154	.650
100	3.41	33.06	26.32	171.4	0.198	.619
150	3.27	33.69	26.84	123.0	0.272	.253
200	3.30	33.85	26.96	111.6	0.331	.164
250	3.56	33.99	27.05	103.9	0.385	.084
300	3.44	34.06	27.12	97.8	0.435	.074
400	3.39	34.16	27.20	90.6	0.529	.057
500	3.27	34.23	27.27	84.8	0.617	.051
600	3.24	34.29	27.32	80.7	0.700	.040
700	3.16	34.34	27.37	76.9	0.779	.034
800	3.04	34.38	27.41	73.3	0.854	.033
1000	2.67	34.43	27.48	66.9	0.994	.047

MV PIONEER
STATION 32

50-19 N 179-08 W 01 JUL 1958 0236 GCT
WEATHER 02 CLOUDS 8 AMT 9 WIND 270 2 KTS SEA 1
SWELL 270 AMT 1 BAR 1018 MBS DRY 08.9 WET 07.5 BT 82

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.70	32.75	25.71	
10	6.72	32.75	25.71	.619
25	6.58	32.75	25.73	.628
50	5.27	32.88	25.99	.611
75	4.06	33.21	26.38	.554
100	4.35	33.41	26.51	.400
124	4.15	33.58	26.66	.315
149	3.78	33.69	26.79	.260
198	3.80	33.91	26.96	.108
248	3.90	34.02	27.04	.050
322	3.80	34.07	27.09	.036

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5 \delta$	ΔD	OXY
0	6.70	32.75	25.71	229.1	0.000	
10	6.72	32.75	25.71	229.5	0.023	.619
20	6.68	32.75	25.71	229.1	0.046	.627
30	6.31	32.76	25.77	223.9	0.069	.628
50	5.27	32.88	25.99	203.2	0.112	.611
75	4.06	33.21	26.38	166.0	0.158	.554
100	4.35	33.41	26.51	154.1	0.198	.400
150	3.78	33.70	26.80	127.1	0.268	.256
200	3.81	33.92	26.97	111.2	0.328	.105
250	3.90	34.02	27.04	105.0	0.382	.048
300	3.86	34.07	27.08	101.3	0.434	.031

MV PIONEER
STATION 33

50-38 N 178-28 W 01 JUL 1958 0728 GCT
WEATHER 02 CLOUDS 8 AMT 9 WIND 270 02 KTS SEA 1
SWELL 270 AMT 1 BAR 1019 MBS DRY 06.1 WET 05.3 BT 84

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.30	32.71	25.73	
10	6.65	32.71	25.69	.627
25	6.57	32.71	25.70	.624
50	4.25	33.04	26.23	.545
75	3.42	33.19	26.43	.579
99	3.55	33.36	26.55	.444
124	3.86	33.58	26.69	.307
149	3.87	33.75	26.83	.211
198	3.74	33.88	26.94	.128
248	3.80	33.98	27.02	.072
322	3.72	34.07	27.10	.047

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	6.30	32.71	25.73	227.2	0.000	
10	6.65	32.71	25.69	231.6	0.023	.627
20	6.60	32.71	25.69	231.1	0.046	.624
30	6.48	32.74	25.73	227.5	0.069	.620
50	4.25	33.04	26.23	180.5	0.110	.545
75	3.42	33.19	26.43	161.5	0.153	.579
100	3.57	33.37	26.56	149.5	0.192	.438
150	3.87	33.75	26.83	124.2	0.260	.209
200	3.74	33.88	26.94	113.5	0.319	.125
250	3.80	33.98	27.02	107.0	0.374	.070
300	3.76	34.05	27.08	101.8	0.426	.047

MV PIONEER
STATION 34

51-32 N 176-39 W 01 JUL 1958 2016 GCT
WEATHER 10 CLOUDS 8 AMT 9 WIND 225 06 KTS SEA 0
SWELL - AMT 0 BAR 1020 MBS DRY 06.9 WET 06.4 BT 88

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.40	32.78	25.77	
10	6.86	32.78	25.71	.617
25	6.72	32.81	25.75	.612
50	5.00	33.03	26.14	.516
75	4.90	33.05	26.16	.510
100	4.64	33.14	26.26	.510
125	4.51	33.19	26.32	.491
150	4.42	33.22	26.35	.465
199	4.46	33.31	26.42	.452
248	4.33	33.36	26.47	.434
298	4.30	33.46	26.55	.384

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
	0	6.40	32.78	25.77	223.2	0.000	
	10	6.86	32.78	25.71	229.0	0.023	.617
	20	6.84	32.79	25.72	228.1	0.046	.618
	30	6.25	32.87	25.86	215.0	0.068	.586
	50	5.00	33.03	26.14	189.0	0.108	.516
	75	4.90	33.05	26.16	186.7	0.155	.510
	100	4.64	33.14	26.26	177.4	0.201	.510
	150	4.42	33.22	26.35	169.5	0.288	.465
	200	4.46	33.31	26.42	163.6	0.371	.452
	250	4.33	33.37	26.48	158.2	0.451	.430
*	300	4.30	33.46	26.55	151.5	0.528	.384

MV PIONEER
STATION 35

51-17 N 175-53 W 06 JUL 1958 0740-0850 GCT
WEATHER 02 CLOUDS 8 AMT 9 WIND 270 16 KTS SEA 3
SWELL 270 AMT 2 BAR 0997 MBS DRY 07.2 WET 06.4 BT 91

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.90	32.65	25.61	
10	7.40	32.66	25.55	.601
24	6.32	32.95	25.92	.596
49	4.87	33.25	26.33	.464
74	4.62	33.38	26.46	.454
98	4.45	33.45	26.53	.403
123	4.52	33.55	26.60	.321
147	4.47	33.60	26.65	.289
197	4.35	33.83	26.84	.152
246	4.08	33.94	26.96	.087
296	3.96	34.02	27.03	.055
388	3.77	34.11	27.12	.045
487	3.57	34.19	27.21	.036
683	3.14	34.31	27.34	.040
1031	2.70	34.42	27.47	.050

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	6.90	32.65	25.61	239.1	0.000	
10	7.40	32.66	25.55	244.9	0.024	.601
20	6.61	32.88	25.82	218.5	0.047	.602
30	5.86	33.04	26.04	197.6	0.068	.553
50	4.86	33.26	26.34	170.2	0.105	.464
75	4.61	33.38	26.46	158.8	0.146	.452
100	4.46	33.46	26.54	151.5	0.185	.395
150	4.47	33.62	26.66	140.0	0.258	.279
200	4.33	33.84	26.85	122.5	0.324	.147
250	4.07	33.95	26.97	112.0	0.383	.084
300	3.95	34.02	27.03	106.0	0.437	.055
400	3.75	34.12	27.13	97.2	0.539	.044
500	3.54	34.20	27.22	89.9	0.633	.036
600	3.31	34.26	27.29	83.7	0.720	.038
700	3.11	34.32	27.35	77.8	0.801	.040
800	2.95	34.36	27.40	73.9	0.877	.043
1000	2.72	34.42	27.47	68.2	1.019	.049

MV PIONEER
STATION 36

50-49 N 175-27 W 07 JUL 1958 0052-0120 GCT
WEATHER 02 CLOUDS 8 AMT 9 WIND 290 18 KTS SEA 2
SWELL 280 AMT 2 BAR 1002 MBS DRY 07.8 WET 06.9 BT 93

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.40	32.83	25.81	
9	6.73	32.84	25.78	.600
23	5.58	33.09	26.12	.603
47	5.04	33.18	26.25	.479
70	4.72	33.32	26.40	.427
85	4.68	33.39	26.46	.390
116	4.46	33.67	26.70	.245
163	4.39	33.81	26.82	.172
235	4.05	33.95	26.97	.068
307	3.75	34.03	27.06	.066

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	6.40	32.83	25.81	219.4	0.000	
10	6.63	32.86	25.81	220.1	0.022	.602
20	5.77	33.05	26.06	195.8	0.043	.607
30	5.40	33.11	26.16	187.2	0.062	.559
50	4.98	33.20	26.27	176.0	0.098	.473
75	4.71	33.34	26.42	162.9	0.140	.417
100	4.56	33.54	26.59	146.5	0.179	.310
150	4.42	33.78	26.79	127.5	0.248	.192
200	4.21	33.89	26.90	117.5	0.309	.106
250	3.98	33.97	26.99	109.6	0.366	.059
300	3.78	34.02	27.05	104.2	0.419	.062

MV PIONEER
STATION 37

50-30 N 175-00 W 07 JUL 1958 0623-0729 GCT
WEATHER 51 CLOUDS 8 AMT 9 WIND 270 16 KTS SEA 2
SWELL 280 AMT 2 BAR 1003 MBS DRY 07.2 WET 06.7 BT 95

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.10	32.71	25.63	
10	7.68	32.71	25.55	.590
25	6.84	32.81	25.74	.617
49	5.14	32.98	26.08	.606
73	3.88	33.12	26.33	.534
97	3.85	33.29	26.46	.461
121	3.88	33.49	26.62	.360
145	3.55	33.65	26.78	.302
196	3.27	33.80	26.93	.220
243	3.36	33.90	27.00	.155
292	3.41	33.96	27.04	.122
390	3.40	34.07	27.13	.085
488	3.33	34.15	27.20	.070
684	3.10	34.29	27.33	.061
1028	2.60	34.41	27.47	.061

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	7.10	32.71	25.63	237.2	0.000	
10	7.68	32.71	25.55	244.9	0.024	.590
20	7.14	32.78	25.68	232.7	0.048	.611
30	6.45	32.85	25.82	218.9	0.071	.620
50	5.06	32.99	26.10	192.6	0.112	.603
75	3.88	33.13	26.33	170.3	0.157	.529
100	3.87	33.32	26.49	156.1	0.198	.446
150	3.51	33.67	26.80	126.7	0.269	.293
200	3.28	33.81	26.93	114.4	0.329	.213
250	3.37	33.91	27.00	108.1	0.385	.150
300	3.41	33.97	27.05	104.3	0.438	.118
400	3.39	34.08	27.14	96.6	0.538	.083
500	3.32	34.16	27.21	90.6	0.632	.069
600	3.20	34.24	27.28	84.1	0.719	.064
700	3.08	34.30	27.34	79.0	0.801	.061
800	2.95	34.35	27.39	74.6	0.878	.059
1000	2.65	34.41	27.47	68.2	1.021	.060

MV PIONEER
STATION 38

50-00 N 175-00 W 08 JUL 1958 0017 GCT
WEATHER 02 CLOUDS 8 AMT 8 WIND 295 04 KTS SEA 1
SWELL 290 AMT 1 BAR 1007 MBS DRY 09.4 WET 08.1 BT 97

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.50	32.74	25.59	
10	7.32	32.74	25.62	.606
24	7.20	32.74	25.64	.605
48	5.75	32.89	25.94	.625
73	3.98	33.04	26.25	.635
97	3.25	33.15	26.41	.616
121	3.10	33.21	26.47	.594
145	3.23	33.39	26.60	.469
194	3.25	33.78	26.91	.251
242	3.32	33.86	26.97	.187
316	3.39	33.98	27.06	.126

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	7.50	32.74	25.59	240.2	0.000	
10	7.32	32.74	25.62	237.9	0.024	.606
20	7.29	32.73	25.62	238.4	0.048	.604
30	6.86	32.78	25.71	229.3	0.071	.611
50	5.57	32.90	25.97	205.0	0.114	.627
75	3.90	33.05	26.27	176.5	0.162	.634
100	3.22	33.15	26.41	162.9	0.204	.619
150	3.23	33.44	26.64	141.4	0.280	.440
200	3.26	33.79	26.92	115.7	0.344	.242
250	3.33	33.87	26.98	110.7	0.401	.178
300	3.38	33.95	27.03	105.5	0.455	.135

MV PIONEER
STATION 39

49-30 N 175-00 W 08 JUL 1958 0633-0741 GCT
WEATHER 02 CLOUDS 8 AMT 9 WIND 295 14 KTS SEA 1
SWELL 290 AMT 1 BAR 1008 MBS DRY 06.9 WET 05.8 BT 99

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.60	32.83	25.79	
10	7.15	32.81	25.70	.606
25	6.92	32.83	25.74	.605
50	5.42	32.89	25.98	.640
74	3.75	33.00	26.24	.634
99	3.22	33.11	26.38	.596
124	3.30	33.32	26.54	.484
148	3.50	33.62	26.76	.317
198	3.55	33.85	26.94	.174
247	3.78	33.95	27.00	.101
296	3.73	34.03	27.06	.072
395	3.63	34.14	27.16	.051
494	3.46	34.21	27.23	.045
792	3.15	34.31	27.34	.046
1037	2.61	34.44	27.49	.056

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	6.60	32.83	25.79	221.9	0.000	
10	7.15	32.81	25.70	230.5	0.023	.606
20	7.05	32.82	25.72	228.6	0.046	.603
30	6.64	32.84	25.79	222.0	0.069	.615
50	5.42	32.89	25.98	204.1	0.112	.640
75	3.72	33.00	26.25	178.6	0.160	.634
100	3.22	33.12	26.39	165.2	0.203	.593
150	3.50	33.63	26.77	129.6	0.277	.310
200	3.56	33.85	26.94	114.0	0.338	.170
250	3.78	33.96	27.00	108.3	0.394	.099
300	3.73	34.04	27.07	102.2	0.447	.071
400	3.62	34.14	27.16	94.4	0.545	.051
500	3.46	34.21	27.23	88.3	0.636	.045
600	3.39	34.24	27.26	86.0	0.723	.044
700	3.29	34.27	27.30	83.5	0.808	.044
800	3.14	34.31	27.34	79.6	0.890	.046
1000	2.71	34.42	27.47	68.0	1.038	.054

MV PIONEER
STATION 40

49-00 N 175-00 W 09 JUL 1958 0109 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 220 22 KTS SEA 2
SWELL 260 AMT 1 BAR 1012 MBS DRY 07.8 WET 06.9 BT 101

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.60	32.77	25.74	
9	7.28	32.76	25.64	.599
23	7.22	32.77	25.66	.605
47	5.63	32.89	25.95	.635
71	3.78	33.03	26.27	.638
95	3.44	33.14	26.38	.629
119	3.24	33.25	26.49	.576
143	3.36	33.65	26.80	.338
191	3.20	33.82	26.95	.228
239	3.45	33.93	27.01	.144
312	3.51	34.05	27.10	.088

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	6.60	32.77	25.74	226.4	0.000	
10	7.30	32.76	25.64	236.2	0.023	.599
20	7.29	32.76	25.64	236.2	0.047	.603
30	6.78	32.80	25.74	226.8	0.070	.617
50	5.32	32.91	26.01	201.5	0.113	.636
75	3.71	33.05	26.29	174.8	0.160	.640
100	3.37	33.14	26.39	165.0	0.202	.633
150	3.31	33.68	26.83	124.1	0.274	.320
200	3.26	33.84	26.96	112.0	0.333	.209
250	3.48	33.95	27.03	106.1	0.388	.130
300	3.53	34.03	27.08	101.0	0.440	.091

MV PIONEER
STATION 41

49-20 N 175-41 W 09 JUL 1958 0733 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 270 15 KTS SEA 2
SWELL 270 AMT 1 BAR 1013 MBS DRY 06.9 WET 06.4 BT 103

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.50	32.88	25.84	
9	7.10	32.88	25.76	.610
23	7.10	32.88	25.76	.604
46	5.56	32.94	26.00	.633
69	3.99	33.05	26.26	.640
93	3.34	33.10	26.36	.629
116	3.15	33.16	26.43	.597
139	3.33	33.42	26.62	.500
186	3.40	33.78	26.90	.232
233	3.50	33.88	26.97	.151
303	3.52	34.00	27.06	.100

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	6.50	32.88	25.84	216.9	0.000	
10	7.10	32.88	25.76	224.6	0.022	.609
20	7.10	32.88	25.76	224.8	0.044	.604
30	7.00	32.89	25.78	222.9	0.066	.615
50	5.22	32.96	26.06	196.6	0.108	.635
75	3.78	33.06	26.29	174.7	0.154	.639
100	3.24	33.10	26.37	166.9	0.197	.626
150	3.34	33.53	26.70	135.7	0.273	.421
200	3.44	33.81	26.92	115.9	0.336	.204
250	3.52	33.91	26.99	109.5	0.392	.131
300	3.52	34.00	27.06	103.1	0.445	.100

MV PIONEER
STATION 42

49-49 N 176-47 W 09 JUL 1958 1742 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 270 12 KTS SEA 1
SWELL 270 AMT 1 BAR 1015 MBS DRY 06.7 WET 06.4 BT 106

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.30	32.85	25.84	
10	6.93	32.84	25.75	.611
25	6.93	32.84	25.75	.609
50	5.33	32.97	26.05	.625
75	3.80	33.08	26.30	.633
99	3.20	33.17	26.43	.619
124	3.15	33.30	26.54	.553
149	3.29	33.64	26.80	.353
198	3.20	33.79	26.92	.237
248	3.32	33.88	26.98	.191
322	3.39	33.97	27.05	.172

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	6.30	32.85	25.84	216.7	0.000	
10	6.93	32.84	25.75	225.4	0.022	.611
20	6.93	32.84	25.75	225.6	0.045	.609
30	6.85	32.87	25.78	222.4	0.067	.613
50	5.33	32.97	26.05	197.1	0.109	.625
75	3.80	33.08	26.30	173.3	0.155	.633
100	3.19	33.17	26.43	161.2	0.197	.619
150	3.29	33.64	26.80	127.0	0.269	.350
200	3.21	33.79	26.92	115.2	0.330	.235
250	3.32	33.88	26.98	109.8	0.386	.190
300	3.38	33.95	27.03	105.5	0.440	.172

MV PIONEER
STATION 43

50-07 N 177-15 W 09 JUL 1958 2244 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 225 06 KTS SEA 1
SWELL 240 AMT 1 BAR 1015 MBS DRY 07.8 WET 07.2 BT 108

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.70	32.83	25.77	
10	7.18	32.82	25.70	.615
24	7.14	32.83	25.71	.613
48	4.99	33.08	26.18	.640
72	3.92	33.13	26.33	.624
97	3.35	33.16	26.41	.635
121	3.15	33.45	26.66	.473
146	3.25	33.72	26.86	.314
195	3.21	33.83	26.96	.225
244	3.32	33.92	27.02	.168
318	3.40	34.00	27.07	.121

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	6.70	32.83	25.77	223.1	0.000	
10	7.18	32.82	25.70	230.1	0.023	.615
20	7.15	32.82	25.71	229.9	0.046	.612
30	6.80	32.91	25.82	218.8	0.068	.624
50	4.88	33.08	26.19	184.0	0.108	.638
75	3.83	33.12	26.33	170.6	0.152	.635
100	3.31	33.20	26.44	160.0	0.193	.614
150	3.24	33.73	26.87	119.7	0.263	.306
200	3.22	33.84	26.96	111.6	0.321	.218
250	3.33	33.93	27.02	106.2	0.375	.162
300	3.39	33.99	27.07	102.6	0.427	.128

MV PIONEER
STATION 44

50-22 N 177-45 W 10 JUL 1958 0507-0604 GCT
WEATHER 01 CLOUDS 6 AMT 8 WIND 125 14 KTS SEA 1
SWELL 130 AMT 1 BAR 1012 MBS DRY 07.5 WET 06.9 BT 110

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.80	32.80	25.74	
10	7.12	32.80	25.69	.620
25	7.02	32.80	25.71	.623
50	4.43	32.95	26.14	.619
75	3.45	33.12	26.37	.587
100	3.56	33.49	26.65	.393
125	3.62	33.72	26.83	.272
150	4.00	33.85	26.89	.141
200	3.92	33.97	27.00	.081
249	3.85	34.02	27.04	.061
299	3.80	34.09	27.11	.046
394	3.64	34.16	27.18	.037
493	3.47	34.23	27.25	.039
691	3.15	34.33	27.36	.045
1036	2.58	34.45	27.51	.056

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	6.80	32.80	25.74	226.6	0.000	
10	7.12	32.80	25.69	230.8	0.023	.620
20	7.10	32.80	25.70	230.7	0.046	.622
30	6.50	32.83	25.80	221.0	0.069	.624
50	4.43	32.95	26.14	189.1	0.110	.619
75	3.45	33.12	26.37	167.1	0.155	.587
100	3.56	33.49	26.65	140.4	0.193	.393
150	4.00	33.85	26.89	118.0	0.258	.141
200	3.92	33.97	27.00	108.6	0.315	.081
250	3.85	34.02	27.04	104.5	0.368	.061
300	3.80	34.09	27.11	99.2	0.419	.046
400	3.63	34.16	27.18	93.0	0.515	.037
500	3.46	34.23	27.25	86.8	0.605	.039
600	3.30	34.29	27.31	81.4	0.689	.042
700	3.14	34.33	27.36	77.4	0.768	.045
800	2.97	34.38	27.42	72.6	0.843	.048
1000	2.64	34.44	27.49	65.8	0.981	.055

MV PIONEER
STATION 45

50-59 N 178-50 E 12 JUL 1958 0624-0724 GCT
WEATHER 02 CLOUDS 5 AMT 2 WIND 350 08 KTS SEA 1
SWELL 350 AMT 1 BAR 1009 MBS DRY 07.5 WET 06.1 BT 116

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.70	32.75	25.71	
10	7.32	32.73	25.61	.606
25	7.20	32.73	25.63	.605
49	6.04	32.74	25.79	.609
74	4.28	32.95	26.15	.574
98	3.70	33.21	26.42	.502
123	3.90	33.49	26.62	.323
147	3.95	33.76	26.83	.191
197	4.04	33.94	26.96	.101
246	4.00	34.00	27.01	.077
296	3.74	34.01	27.05	.076
394	3.68	34.13	27.15	.042
492	3.52	34.18	27.20	.038
689	3.19	34.28	27.32	.042
1033	2.66	34.41	27.47	.045

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	6.70	32.75	25.71	229.1	0.000	
10	7.32	32.73	25.61	238.7	0.023	.606
20	7.29	32.73	25.62	238.4	0.047	.605
30	7.00	32.73	25.65	234.8	0.071	.609
50	5.95	32.75	25.81	220.7	0.117	.608
75	4.24	32.96	26.16	186.6	0.168	.573
100	3.72	33.23	26.43	161.5	0.212	.486
150	3.96	33.77	26.83	123.6	0.283	.184
200	4.04	33.95	26.97	111.3	0.342	.099
250	3.97	34.00	27.02	107.3	0.397	.077
300	3.74	34.02	27.06	103.8	0.450	.074
400	3.67	34.13	27.15	95.6	0.550	.042
500	3.51	34.18	27.21	91.0	0.643	.038
600	3.34	34.24	27.27	85.5	0.731	.040
700	3.17	34.28	27.32	81.4	0.814	.042
800	3.01	34.33	27.37	76.7	0.893	.044
1000	2.71	34.40	27.45	69.5	1.039	.045

MV PIONEER
STATION 46

50-34 N 178-00 E 13 JUL 1958 0110 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 235 16 KTS SEA 3
SWELL 240 AMT 2 BAR 1012 MBS DRY 08.1 WET 07.2 BT 118

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.70	32.73	25.69	
10	7.29	32.72	25.61	.606
24	7.20	32.72	25.62	.605
48	5.03	32.85	25.99	.596
72	3.80	33.12	26.33	.545
96	3.47	33.27	26.49	.503
120	3.63	33.49	26.65	.358
144	4.02	33.72	26.79	.232
192	3.84	33.89	26.94	.111
240	3.73	33.96	27.01	.081
313	3.66	34.07	27.10	.052

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	6.70	32.73	25.69	230.6	0.000	
10	7.29	32.72	25.61	239.0	0.023	.606
20	7.29	32.72	25.61	239.2	0.047	.605
30	6.57	32.74	25.72	228.6	0.070	.605
50	4.89	32.88	26.03	199.1	0.113	.591
75	3.73	33.13	26.35	168.9	0.159	.545
100	3.48	33.31	26.52	153.2	0.199	.478
150	3.99	33.75	26.82	125.4	0.269	.212
200	3.82	33.90	26.95	112.8	0.329	.105
250	3.71	33.97	27.02	106.9	0.384	.076
300	3.66	34.05	27.09	100.8	0.436	.056

MV PIONEER
STATION 47

50-18 N 177-28 E 13 JUL 1958 0626-0805 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 235 20 KTS SEA 4
SWELL 240 AMT 2 BAR 1012 MBS DRY 06.9 WET 06.4 BT 120

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.70	32.86	25.80	
10	7.32	32.86	25.71	.597
24	7.26	32.86	25.72	.613
49	4.34	32.94	26.14	.635
73	3.43	33.03	26.30	.617
98	3.32	33.21	26.45	.509
122	3.66	33.55	26.69	.300
146	3.86	33.81	26.88	.151
195	3.62	33.94	27.00	.090
244	3.65	34.00	27.05	.068
293	3.67	34.07	27.10	.052
390	3.60	34.14	27.16	.039
488	3.43	34.21	27.24	.037
686	3.09	34.31	27.35	.039
1032	2.55	34.43	27.49	.055

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	6.70	32.86	25.80	220.9	0.000	
10	7.32	32.86	25.71	229.0	0.022	.597
20	7.30	32.86	25.72	228.9	0.045	.609
30	6.20	32.88	25.88	213.7	0.067	.622
50	4.29	32.94	26.14	188.4	0.107	.636
75	3.40	33.04	26.31	172.7	0.152	.612
100	3.35	33.24	26.47	157.3	0.193	.489
150	3.83	33.82	26.89	118.5	0.262	.145
200	3.62	33.95	27.01	107.1	0.318	.087
250	3.65	34.01	27.06	103.3	0.371	.066
300	3.67	34.08	27.11	98.6	0.421	.051
400	3.58	34.15	27.17	93.2	0.517	.039
500	3.41	34.22	27.25	87.0	0.607	.037
600	3.23	34.27	27.30	82.1	0.692	.037
700	3.07	34.32	27.36	77.4	0.772	.039
800	2.90	34.36	27.41	73.3	0.847	.043
1000	2.60	34.42	27.48	66.9	0.987	.053

MV PIONEER
STATION 48

49-58 N 176-50 E 14 JUL 1958 0036 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 205 12 KTS SEA 2
SWELL 240 AMT 2 BAR 1011 MBS DRY 08.1 WET 06.9 BT 122

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.80	32.87	25.79	
10	7.30	32.87	25.72	.602
25	7.28	32.87	25.73	.610
50	5.24	32.94	26.04	.635
75	4.07	32.97	26.19	.631
99	3.43	33.06	26.32	.615
124	3.16	33.24	26.49	.506
149	3.56	33.60	26.74	.298
198	3.75	33.93	26.98	.091
248	3.72	34.04	27.07	.050
322	3.63	34.13	27.15	.041

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	6.80	32.87	25.79	221.4	0.000	
10	7.30	32.87	25.72	228.0	0.022	.602
20	7.29	32.87	25.73	228.0	0.045	.607
30	7.28	32.89	25.74	226.5	0.068	.617
50	5.24	32.94	26.04	198.4	0.110	.635
75	4.07	32.97	26.19	184.2	0.158	.631
100	3.41	33.06	26.32	171.4	0.202	.613
150	3.57	33.61	26.75	131.8	0.278	.292
200	3.75	33.94	26.99	109.1	0.338	.089
250	3.72	34.04	27.07	101.7	0.391	.049
300	3.66	34.11	27.14	96.3	0.440	.037

MV PIONEER
STATION 49

49-39 N 176-11 E 14 JUL 1958 0614-0710 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 135 04 KTS SEA 1
SWELL 140 AMT 1 BAR 1010 MBS DRY 07.8 WET 07.5 BT 124

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.00	32.87	25.76	
10	7.33	32.87	25.72	.610
25	7.30	32.88	25.73	.607
50	4.78	32.94	26.09	.625
75	3.49	33.02	26.28	.640
99	3.34	33.26	26.49	.484
124	3.79	33.64	26.75	.257
148	3.82	33.80	26.87	.157
198	3.71	33.94	26.99	.085
247	3.75	34.03	27.06	.054
321	3.66	34.10	27.13	.046
394	3.48	34.18	27.21	.044
493	3.32	34.25	27.28	.035
690	3.00	34.35	27.39	.041
1034	2.48	34.46	27.52	.060

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	7.00	32.87	25.76	223.9	0.000	
10	7.33	32.87	25.72	228.4	0.023	.610
20	7.32	32.87	25.72	228.4	0.046	.607
30	7.05	32.89	25.77	223.5	0.069	.611
50	4.78	32.94	26.09	193.4	0.111	.625
75	3.49	33.02	26.28	175.0	0.157	.640
100	3.37	33.28	26.50	154.5	0.198	.473
150	3.81	33.81	26.88	119.1	0.266	.153
200	3.71	33.94	26.99	108.7	0.323	.083
250	3.75	34.03	27.06	102.8	0.376	.054
300	3.69	34.08	27.11	98.8	0.426	.048
400	3.47	34.18	27.21	89.9	0.520	.043
500	3.31	34.25	27.28	83.8	0.607	.035
600	3.14	34.31	27.34	78.2	0.688	.038
700	2.98	34.35	27.39	74.3	0.764	.041
800	2.83	34.39	27.44	70.4	0.836	.046
1000	2.53	34.45	27.51	63.9	0.970	.058

MV PIONEER
STATION 50

49-18 N 175-37 E 15 JUL 1958 0106 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 150 08 KTS SEA 2
SWELL 150 AMT 1 BAR 1010 MBS DRY 09.4 WET 08.6 BT 126

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.20	32.95	25.80	
10	7.50	32.89	25.71	.600
24	7.37	32.89	25.73	.611
48	4.98	32.96	26.08	.640
72	4.08	32.99	26.20	.639
96	3.44	33.20	26.43	.509
120	3.72	33.59	26.72	.272
144	3.76	33.78	26.86	.170
192	3.84	33.96	27.00	.059
240	3.84	34.04	27.06	.047
312	3.65	34.10	27.13	.045

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	7.20	32.95	25.80	220.5	0.000	
10	7.50	32.89	25.71	229.1	0.022	.600
20	7.42	32.89	25.72	228.2	0.045	.607
30	7.30	32.91	25.76	225.3	0.068	.621
50	4.90	32.96	26.09	193.2	0.110	.645
75	3.95	33.01	26.23	180.0	0.157	.629
100	3.50	33.28	26.49	155.6	0.199	.460
150	3.77	33.81	26.89	118.7	0.268	.151
200	3.85	33.98	27.01	107.1	0.324	.056
250	3.83	34.05	27.07	102.1	0.376	.046
300	3.70	34.10	27.12	97.4	0.426	.044

MV PIONEER
STATION 51

49-00 N 175-00 E 15 JUL 1958 0710-0814 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 145 08 KTS SEA 1
SWELL 150 AMT 1 BAR 1011 MBS DRY 08.1 WET 07.8 BT 128

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.20	32.87	25.74	
10	7.75	32.86	25.65	.595
24	7.33	32.84	25.70	.600
49	4.38	32.98	26.17	.605
74	3.58	33.03	26.28	.615
98	3.39	33.15	26.40	.547
123	3.80	33.64	26.75	.262
147	3.86	33.88	26.93	.121
196	3.78	33.96	27.00	.072
245	3.73	34.05	27.08	.055
294	3.68	34.08	27.11	.045
392	3.53	34.19	27.21	.041
490	3.39	34.24	27.26	.035
687	3.06	34.32	27.36	.044
1030	2.55	34.44	27.50	.051

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	7.20	32.87	25.74	226.5	0.000	
10	7.75	32.86	25.65	234.7	0.023	.595
20	7.54	32.84	25.67	233.5	0.046	.599
30	6.43	32.88	25.85	216.4	0.068	.601
50	4.34	32.98	26.17	185.9	0.108	.607
75	3.56	33.03	26.29	174.9	0.153	.616
100	3.44	33.20	26.43	161.1	0.195	.519
150	3.85	33.88	26.93	114.2	0.264	.117
200	3.78	33.97	27.01	107.2	0.319	.070
250	3.73	34.05	27.08	101.1	0.371	.054
300	3.67	34.09	27.12	97.9	0.421	.045
400	3.52	34.19	27.21	89.6	0.515	.040
500	3.37	34.24	27.27	85.1	0.602	.036
600	3.20	34.29	27.32	80.3	0.685	.040
700	3.04	34.32	27.36	77.1	0.764	.044
800	2.88	34.36	27.41	73.1	0.839	.048
1000	2.59	34.43	27.49	66.0	0.978	.051

MV PIONEER
STATION 52

49-30 N 174-58 E 16 JUL 1958 0036 GCT
WEATHER 51 CLOUDS 6 AMT 9 WIND 145 10 KTS SEA 2
SWELL 150 AMT 2 BAR 1009 MBS DRY 08.1 WET 07.5 BT 130

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.20	32.80	25.68	
10	7.69	32.80	25.61	.583
25	7.44	32.80	25.65	.609
49	4.96	32.94	26.07	.619
74	3.80	33.09	26.31	.576
98	3.70	33.37	26.54	.438
123	3.98	33.69	26.77	.249
147	3.95	33.83	26.88	.159
196	3.82	33.97	27.01	.092
245	3.84	34.01	27.04	.063
319	3.53	34.05	27.10	.060

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	7.20	32.80	25.68	231.7	0.000	
10	7.69	32.80	25.61	238.4	0.024	.583
20	7.63	32.79	25.62	238.5	0.048	.602
30	6.81	32.83	25.76	224.9	0.071	.615
50	4.89	32.94	26.08	194.6	0.113	.619
75	3.79	33.10	26.32	171.7	0.159	.571
100	3.73	33.40	26.56	148.8	0.199	.419
150	3.94	33.84	26.89	118.1	0.266	.154
200	3.83	33.97	27.01	107.7	0.322	.089
250	3.83	34.01	27.04	105.1	0.375	.061
300	3.65	34.04	27.08	101.4	0.427	.056

MV PIONEER
STATION 53

50-00 N 175-00 E 16 JUL 1958 0654-0822 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 145 20 KTS SEA 4
SWELL 150 AMT 2 BAR 1007 MBS DRY 07.5 WET 07.2 BT 132

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.00	32.82	25.73	
10	7.58	32.81	25.64	.605
25	7.24	32.85	25.72	.612
49	5.54	33.01	26.06	.611
74	4.00	33.04	26.25	.595
112	3.47	33.11	26.36	.574
122	3.64	33.61	26.74	.295
159	3.90	33.86	26.91	.127
197	3.80	33.95	26.99	.102
392	3.50	34.12	27.16	.061
490	3.37	34.22	27.25	.055
686	3.14	34.33	27.36	.040
1032	2.59	34.42	27.48	.051

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	7.00	32.82	25.73	227.7	0.000	
10	7.58	32.81	25.64	236.1	0.023	.605
20	7.42	32.83	25.68	232.7	0.046	.610
30	6.87	32.89	25.80	221.2	0.069	.613
50	5.46	33.01	26.07	195.6	0.111	.610
75	3.97	33.04	26.25	178.0	0.158	.595
100	3.47	33.08	26.33	170.4	0.202	.582
150	3.87	33.81	26.88	119.7	0.275	.155
200	3.79	33.95	26.99	108.8	0.332	.101
250	3.71	33.99	27.03	105.4	0.386	.087
300	3.63	34.03	27.07	102.0	0.438	.076
400	3.49	34.13	27.17	93.8	0.536	.061
500	3.36	34.23	27.26	85.7	0.626	.054
600	3.25	34.29	27.32	80.8	0.709	.045
700	3.12	34.34	27.37	76.5	0.788	.040
800	2.98	34.37	27.41	73.4	0.863	.038
1000	2.65	34.42	27.48	67.4	1.004	.048

MV PIONEER
STATION 54

50-32 N 174-58 E 17 JUL 1958 0128 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 105 08 KTS SEA 2
SWELL 110 AMT 1 BAR 1004 MBS DRY 08.9 WET 08.1 BT 134

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.30	32.82	25.68	
10	7.79	32.78	25.58	.594
24	7.45	32.83	25.67	.604
48	5.54	33.06	26.10	.569
73	3.95	33.13	26.33	.519
97	3.88	33.30	26.47	.468
121	3.90	33.51	26.63	.338
145	3.91	33.68	26.77	.300
193	3.82	33.87	26.93	.132
241	3.78	33.94	26.99	.096
314	3.70	34.04	27.08	.066

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	7.30	32.82	25.68	231.6	0.000	
10	7.79	32.78	25.58	241.2	0.024	.594
20	7.61	32.81	25.63	236.7	0.048	.603
30	6.94	32.90	25.80	221.3	0.071	.596
50	5.36	33.06	26.12	190.7	0.112	.565
75	3.94	33.14	26.34	170.2	0.157	.518
100	3.88	33.33	26.49	155.5	0.198	.447
150	3.90	33.71	26.79	127.5	0.269	.276
200	3.81	33.88	26.94	114.2	0.329	.126
250	3.77	33.95	27.00	109.0	0.385	.091
300	3.72	34.02	27.06	103.6	0.438	.069

MV PIONEER
STATION 55

51-00 N 175-00 E 17 JUL 1958 0722-0822 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 090 12 KTS SEA 2
SWELL 110 AMT 1 BAR 1003 MBS DRY 07.5 WET 06.9 BT 136

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.20	32.71	25.61	
10	7.73	32.75	25.57	.591
25	7.40	32.78	25.64	.600
49	6.11	32.83	25.85	.605
74	4.02	33.03	26.24	.557
98	3.62	33.28	26.48	.495
123	3.99	33.51	26.63	.338
147	4.14	33.63	26.71	.294
196	3.86	33.82	26.88	.167
208	3.82	33.88	26.94	.147
248	3.75	33.89	26.95	.114
386	3.71	34.07	27.10	.060
482	3.55	34.11	27.15	.063
675	3.38	34.23	27.26	.050
1014	2.96	34.37	27.41	.047

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	7.20	32.71	25.61	238.5	0.000	
10	7.73	32.75	25.57	242.6	0.024	.591
20	7.55	32.77	25.61	238.9	0.048	.597
30	7.19	32.78	25.67	233.5	0.072	.605
50	5.99	32.84	25.87	214.4	0.117	.603
75	3.99	33.04	26.25	178.2	0.166	.556
100	3.66	33.30	26.49	155.6	0.208	.478
150	4.12	33.64	26.72	134.9	0.281	.284
200	3.85	33.84	26.90	117.6	0.344	.160
250	3.75	33.89	26.95	113.3	0.402	.113
300	3.76	33.97	27.01	107.8	0.457	.086
400	3.68	34.08	27.11	99.5	0.561	.061
500	3.54	34.12	27.15	95.8	0.659	.061
600	3.45	34.19	27.22	90.4	0.752	.054
700	3.35	34.24	27.27	86.3	0.840	.049
800	3.24	34.29	27.32	82.1	0.924	.046
1000	2.98	34.37	27.41	74.7	1.081	.047

MV PIONEER
STATION 56

51-33 N 175-00 E 18 JUL 1958 0107 GCT
WEATHER 02 CLOUDS 8 AMT 8 WIND 360 02 KTS SEA 0
SWELL 090 AMT 1 BAR 1002 MBS DRY 10.0 WET 08.1 BT 138

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.60	32.79	25.62	
10	7.38	32.80	25.66	.601
24	6.98	32.91	25.80	.607
49	5.45	33.11	26.15	.600
74	4.66	33.29	26.38	.469
98	4.50	33.34	26.44	.440
123	4.34	33.46	26.55	.388
147	4.08	33.49	26.60	.375
196	4.00	33.64	26.73	.297
245	4.01	33.71	26.78	.254
319	3.98	33.88	26.92	.155

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	7.60	32.79	25.62	237.8	0.000	
10	7.38	32.80	25.66	234.2	0.024	.601
20	7.13	32.88	25.76	225.1	0.047	.606
30	6.55	32.96	25.90	211.9	0.069	.617
50	5.41	33.12	26.16	186.8	0.109	.593
75	4.65	33.29	26.38	166.0	0.153	.468
100	4.49	33.35	26.45	160.1	0.194	.434
150	4.07	33.50	26.61	144.9	0.270	.369
200	4.00	33.64	26.73	134.1	0.340	.294
250	4.01	33.72	26.79	128.6	0.406	.249
300	3.99	33.83	26.88	120.6	0.468	.184

MV PIONEER
STATION 57

52-00 N 175-00 E 18 JUL 1958 0638 GCT
WEATHER 02 CLOUDS 8 AMT 8 WIND 020 06 KTS SEA 1
SWELL 090 AMT 1 BAR 1002 MBS DRY 08.1 WET 06.9 BT 140

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.20	33.03	25.86	
10	7.61	33.02	25.80	.597
25	6.58	33.02	25.94	.612
50	4.92	33.26	26.33	.574
75	4.20	33.31	26.45	.524
99	4.15	33.35	26.48	.483
124	3.98	33.36	26.51	.472
149	3.92	33.39	26.54	.445
199	3.92	33.60	26.70	.326
248	3.92	33.76	26.83	.254
298	3.88	33.85	26.91	.270

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
	0	7.20	33.03	25.86	214.6	0.000	
	10	7.61	33.02	25.80	220.9	0.022	.597
	20	6.92	33.01	25.89	212.7	0.044	.610
	30	6.17	33.08	26.04	198.3	0.065	.605
	50	4.92	33.26	26.33	170.9	0.102	.574
	75	4.20	33.31	26.45	159.9	0.143	.524
	100	4.14	33.35	26.48	156.5	0.183	.483
	150	3.92	33.39	26.54	151.7	0.260	.442
	200	3.92	33.60	26.70	136.3	0.332	.324
	250	3.92	33.77	26.84	124.0	0.397	.255
*	300	3.88	33.85	26.91	118.0	0.457	.270

MV PIONEER
STATION 58

52-34 N 175-00 E 19 JUL 1958 0114 GCT
WEATHER 02 CLOUDS 1 AMT 6 WIND 020 02 KTS SEA 1
SWELL 020 AMT 1 BAR 1007 MBS DRY 11.4 WET 09.2 BT 142

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.80	33.02	25.77	
10	7.46	32.94	25.76	.618
24	6.86	32.97	25.86	.620
49	5.36	33.11	26.16	.564
73	4.92	33.21	26.29	.530
98	4.26	33.33	26.46	.469
123	4.20	33.39	26.51	.443
147	4.12	33.41	26.53	.423
196	3.94	33.58	26.69	.327
246	3.95	33.72	26.80	.246
320	3.84	33.90	26.95	.159

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	7.80	33.02	25.77	223.3	0.000	
10	7.46	32.94	25.76	224.9	0.022	.618
20	7.05	32.96	25.83	218.1	0.044	.622
30	6.40	33.01	25.95	206.4	0.065	.605
50	5.35	33.11	26.16	186.8	0.104	.563
75	4.85	33.22	26.30	173.4	0.149	.524
100	4.26	33.34	26.46	158.5	0.190	.467
150	4.10	33.42	26.54	151.2	0.267	.417
200	3.94	33.59	26.69	137.3	0.339	.320
250	3.95	33.73	26.80	127.3	0.405	.240
300	3.88	33.85	26.91	118.0	0.466	.179

MV PIONEER
STATION 59

53-00 N 175-00 E 19 JUL 1958 0643-0735 GCT
WEATHER 02 CLOUDS 8 AMT 8 WIND 035 02 KTS SEA 0
SWELL 040 AMT 1 BAR 1009 MBS DRY 09.4 WET 07.5 BT 144

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.40	33.09	25.74	
10	7.61	33.08	25.85	.612
24	6.82	33.09	25.96	.622
49	4.68	33.19	26.30	.565
74	4.36	33.23	26.37	.520
98	3.50	33.26	26.47	.562
123	3.75	33.37	26.54	.466
147	3.97	33.47	26.60	.392
196	3.88	33.55	26.67	.339
245	4.02	33.72	26.79	.251
295	3.96	33.86	26.91	.154
392	3.82	33.99	27.02	.093
489	3.66	34.06	27.10	.074
687	3.50	34.17	27.20	.051
1029	3.04	34.33	27.37	.045

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	8.40	33.09	25.74	226.5	0.000	
10	7.61	33.08	25.85	216.4	0.022	.612
20	7.08	33.08	25.92	209.6	0.043	.622
30	6.14	33.12	26.07	195.0	0.063	.607
50	4.68	33.19	26.30	173.6	0.100	.561
75	4.30	33.23	26.37	166.9	0.143	.524
100	3.52	33.27	26.48	156.6	0.183	.554
150	3.96	33.47	26.60	146.1	0.259	.390
200	3.90	33.57	26.68	138.4	0.330	.332
250	4.01	33.74	26.81	127.1	0.396	.239
300	3.95	33.87	26.92	117.2	0.457	.150
400	3.80	34.00	27.03	106.7	0.569	.091
500	3.65	34.07	27.10	100.7	0.673	.072
600	3.58	34.12	27.15	97.0	0.772	.059
700	3.49	34.18	27.21	92.3	0.867	.050
800	3.37	34.23	27.26	88.0	0.957	.044
1000	3.09	34.32	27.36	79.6	1.125	.044

MV PIONEER
STATION 60

53-30 N 175-00 E 20 JUL 1958 0109 GCT
WEATHER 02 CLOUDS 8 AMT 9 WIND 165 04 KTS SEA 1
SWELL 070 AMT 1 BAR 1010 MBS DRY 09.2 WET 07.5 BT 146

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.00	33.04	25.76	
10	7.79	33.02	25.77	.608
24	6.29	33.06	26.01	.612
49	5.12	33.14	26.21	.576
73	3.92	33.17	26.36	.600
98	3.58	33.22	26.44	.560
123	3.58	33.29	26.49	.507
147	3.75	33.39	26.55	.494
196	4.05	33.53	26.64	.352
245	3.99	33.66	26.74	.271
319	3.97	33.86	26.91	.151

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	8.00	33.04	25.76	224.6	0.000	
10	7.79	33.02	25.77	223.4	0.022	.608
20	6.66	33.05	25.95	206.5	0.043	.613
30	6.02	33.08	26.06	196.5	0.063	.598
50	5.05	33.14	26.22	181.3	0.101	.578
75	3.88	33.17	26.37	167.3	0.145	.597
100	3.57	33.22	26.44	160.8	0.186	.554
150	3.78	33.40	26.56	149.6	0.264	.484
200	4.04	33.54	26.64	142.0	0.337	.345
250	3.99	33.67	26.75	132.2	0.406	.263
300	3.97	33.81	26.87	121.9	0.470	.182

MV PIONEER
STATION 61

53-15 N 175-45 E 20 JUL 1958 0720-0819 GCT
WEATHER 02 CLOUDS 8 AMT 9 WIND 225 03 KTS SEA 1
SWELL 050 AMT 1 BAR 1010 MBS DRY 08.1 WET 06.7 BT 148

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.60	33.05	25.82	
10	7.72	33.04	25.80	.613
25	5.84	33.08	26.08	.633
49	3.88	33.14	26.34	.612
74	3.50	33.19	26.42	.587
99	3.45	33.24	26.46	.539
123	3.56	33.33	26.52	.483
148	3.50	33.35	26.55	.474
197	3.80	33.53	26.66	.341
246	4.02	33.74	26.81	.222
295	3.98	33.85	26.90	.156
392	3.82	33.97	27.01	.102
490	3.68	34.04	27.08	.076
687	3.44	34.16	27.20	.058
1032	3.00	34.33	27.37	.048

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	7.60	33.05	25.82	218.4	0.000	
10	7.72	33.04	25.80	220.9	0.022	.613
20	6.41	33.07	26.00	201.9	0.043	.629
30	5.30	33.09	26.15	187.6	0.062	.629
50	3.86	33.14	26.34	169.2	0.098	.611
75	3.49	33.19	26.42	162.2	0.139	.585
100	3.46	33.25	26.47	157.5	0.179	.536
150	3.51	33.36	26.55	150.0	0.256	.468
200	3.82	33.55	26.67	139.1	0.328	.332
250	4.02	33.75	26.81	126.5	0.394	.216
300	3.97	33.86	26.91	118.1	0.455	.153
400	3.81	33.98	27.02	108.3	0.568	.099
500	3.67	34.05	27.09	102.4	0.673	.075
600	3.55	34.11	27.15	97.4	0.773	.065
700	3.42	34.17	27.21	92.3	0.868	.057
800	3.30	34.22	27.26	88.0	0.958	.052
1000	3.04	34.32	27.36	79.0	1.125	.048

MV PIONEER
STATION 62

53-06 N 176-25 E 20 JUL 1958 2325 GCT
WEATHER 61 CLOUDS 8 AMT 9 WIND 245 02 KTS SEA 1
SWELL 240 AMT 1 BAR 1009 MBS DRY 08.9 WET 07.8 BT 150

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.90	33.01	25.75	
10	7.68	33.04	25.80	
25	6.15	33.07	26.03	
49	3.51	33.12	26.36	
74	3.22	33.19	26.44	
99	3.15	33.26	26.51	
123	3.65	33.39	26.56	
148	3.84	33.53	26.66	
198	3.90	33.73	26.81	
248	3.85	33.85	26.91	
322	3.77	33.97	27.01	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	7.90	33.01	25.75	225.5	0.000	
10	7.68	33.04	25.80	220.4	0.022	
20	6.67	33.06	25.96	205.8	0.043	
30	5.41	33.08	26.13	189.5	0.063	
50	3.49	33.12	26.36	167.3	0.099	
75	3.21	33.19	26.45	159.7	0.140	
100	3.18	33.27	26.51	153.5	0.179	
150	3.84	33.54	26.66	139.7	0.252	
200	3.90	33.74	26.82	125.6	0.318	
250	3.85	33.85	26.91	117.3	0.379	
300	3.79	33.94	26.99	110.3	0.436	

MV PIONEER
STATION 63

53-07 N 176-55 E 21 JUL 1958 0232-0334 GCT
WEATHER 02 CLOUDS 8 AMT 9 WIND 315 08 KTS SEA 2
SWELL 250 AMT 1 BAR 1010 MBS DRY 10.0 WET 08.3 BT 152

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.90	33.07	25.80	
10	7.68	33.07	25.83	.613
24	6.81	33.08	25.96	.637
49	3.72	33.14	26.36	.650
73	3.07	33.17	26.44	.629
98	2.95	33.23	26.50	.627
122	2.68	33.26	26.55	.616
147	2.72	33.35	26.62	.517
196	3.84	33.71	26.80	.237
245	3.84	33.85	26.91	.151
294	3.84	33.93	26.97	
390	3.68	34.04	27.08	.071
488	3.56	34.12	27.15	.056
683	3.29	34.24	27.27	.047
1026	2.78	34.44	27.48	.045

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	7.90	33.07	25.80	221.0	0.000	
10	7.68	33.07	25.83	218.1	0.022	.613
20	7.12	33.08	25.91	210.1	0.043	.631
30	5.84	33.10	26.09	192.9	0.063	.643
50	3.68	33.14	26.36	167.5	0.099	.649
75	3.07	33.18	26.45	159.2	0.140	.629
100	2.92	33.23	26.50	154.3	0.179	.629
150	2.82	33.38	26.63	142.4	0.253	.494
200	3.84	33.72	26.81	126.5	0.320	.229
250	3.84	33.86	26.92	116.4	0.381	.147
300	3.83	33.94	26.98	110.7	0.438	.113
400	3.67	34.05	27.09	101.6	0.544	.069
500	3.54	34.13	27.16	95.1	0.642	.055
600	3.41	34.19	27.22	90.0	0.735	.050
700	3.27	34.25	27.28	84.7	0.822	.046
800	3.12	34.31	27.35	79.4	0.904	.044
1000	2.82	34.43	27.47	68.5	1.052	.045

MV PIONEER
STATION 64

53-03 N 177-26 E 22 JUL 1958 0007 GCT
WEATHER 03 CLOUDS 8 AMT 4 WIND 300 08 KTS SEA 2
SWELL 300 AMT 1 BAR 1016 MBS DRY 12.8 WET 10.0 BT 154

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.00	33.14	25.84	
10	7.62	33.14	25.89	
25	6.47	33.17	26.07	
50	3.69	33.21	26.42	
74	3.14	33.23	26.48	
99	2.89	33.25	26.52	
124	2.75	33.32	26.59	
148	3.36	33.53	26.70	
198	3.80	33.78	26.86	
247	3.78	33.88	26.94	
321	3.70	34.00	27.04	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	8.00	33.14	25.84	217.2	0.000	
10	7.62	33.14	25.89	212.1	0.021	
20	6.90	33.16	26.01	201.3	0.042	
30	5.73	33.18	26.17	185.7	0.061	
50	3.69	33.21	26.42	162.4	0.096	
75	3.13	33.23	26.48	156.0	0.136	
100	2.87	33.25	26.52	152.4	0.175	
150	3.39	33.54	26.71	135.4	0.247	
200	3.80	33.78	26.86	121.6	0.311	
250	3.78	33.89	26.95	113.6	0.370	
300	3.73	33.97	27.02	107.5	0.425	

MV PIONEER
STATION 65

53-00 N 178-00 E 22 JUL 1958 0516-0615 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 215 15 KTS SEA 2
SWELL 220 AMT 1 BAR 1014 MBS DRY 08.9 WET 06.9 BT 156

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.00	33.11	25.81	
10	7.15	33.11	25.93	.625
25	5.71	33.12	26.13	.638
49	3.75	33.18	26.39	.651
74	2.96	33.19	26.47	.645
99	2.72	33.25	26.54	.600
123	2.67	33.36	26.63	.504
148	3.76	33.65	26.76	.286
197	3.80	33.82	26.89	.174
246	3.77	33.92	26.97	.116
295	3.77	34.00	27.04	.085
380	3.65	34.08	27.11	.066
478	3.51	34.17	27.20	.052
673	3.20	34.27	27.31	.046
1014	2.72	34.39	27.45	.050

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	8.00	33.11	25.81	219.4	0.000	
10	7.15	33.11	25.93	208.1	0.021	.625
20	6.17	33.11	26.06	196.0	0.041	.634
30	5.20	33.14	26.20	182.7	0.060	.642
50	3.71	33.18	26.39	164.8	0.095	.652
75	2.95	33.19	26.47	157.5	0.135	.644
100	2.70	33.25	26.54	150.9	0.174	.598
150	3.76	33.66	26.77	129.9	0.244	.280
200	3.80	33.83	26.90	117.9	0.306	.170
250	3.77	33.93	26.98	110.5	0.363	.113
300	3.76	34.00	27.04	105.5	0.417	.084
400	3.62	34.10	27.13	97.4	0.518	.063
500	3.47	34.18	27.21	90.6	0.612	.051
600	3.31	34.24	27.27	85.2	0.700	.048
700	3.16	34.28	27.32	81.3	0.783	.046
800	3.01	34.32	27.36	77.5	0.862	.045
1000	2.74	34.39	27.44	70.6	1.010	.049

MV PIONEER
STATION 66

53-00 N 179-48 E 24 JUL 1958 0442-0537 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 050 15 KTS SEA 3
SWELL 050 AMT 4 BAR 1007 MBS DRY 08.6 WET 07.5 BT 160

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.20	33.03	25.86	
10	7.82	33.01	25.76	.603
25	6.58	33.11	26.01	.629
50	3.92	33.14	26.34	.650
75	3.14	33.17	26.44	.635
99	3.14	33.23	26.48	.603
124	2.43	33.25	26.56	.597
149	2.78	33.36	26.62	.492
198	4.00	33.73	26.80	.221
248	3.92	33.87	26.92	.136
297	3.87	33.93	26.97	.110
392	3.62	34.05	27.09	.060
490	3.48	34.12	27.16	.057
686	3.25	34.23	27.27	.046
1029	2.80	34.36	27.41	.048

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	7.20	33.03	25.86	214.6	0.000	
10	7.82	33.01	25.76	224.5	0.022	.603
20	7.02	33.08	25.93	208.8	0.044	.621
30	5.90	33.12	26.10	192.1	0.064	.636
50	3.92	33.14	26.34	169.8	0.100	.650
75	3.14	33.17	26.44	160.6	0.141	.635
100	3.09	33.23	26.49	155.7	0.181	.605
150	2.82	33.37	26.62	143.1	0.256	.485
200	4.00	33.74	26.81	126.6	0.323	.216
250	3.92	33.87	26.92	116.5	0.384	.135
300	3.86	33.93	26.97	111.8	0.441	.108
400	3.61	34.06	27.10	100.3	0.547	.060
500	3.47	34.13	27.17	94.3	0.644	.056
600	3.35	34.18	27.22	90.1	0.736	.050
700	3.23	34.24	27.28	85.1	0.824	.046
800	3.11	34.28	27.32	81.5	0.907	.044
1000	2.84	34.35	27.40	74.6	1.063	.047

MV PIONEER
STATION 67

53-04 N 179-16 W 25 JUL 1958 0038 GCT
WEATHER 03 CLOUDS 2 AMT 5 WIND 105 11 KTS SEA 2
SWELL 110 AMT 1 BAR 1006 MBS DRY 08.9 WET 07.5 BT 162

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.10	33.07	25.91	
10	6.61	33.11	26.01	
24	5.24	33.13	26.19	
48	5.18	33.30	26.33	
74	4.95	33.31	26.36	
95	4.77	33.35	26.42	
119	4.62	33.38	26.46	
143	4.39	33.39	26.49	
192	3.84	33.44	26.58	
240	3.91	33.61	26.71	
268	3.88	33.70	26.79	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	7.10	33.07	25.91	210.3	0.000	
10	6.61	33.11	26.01	201.2	0.021	
20	5.53	33.12	26.15	187.8	0.040	
30	5.24	33.19	26.24	179.4	0.058	
50	5.16	33.30	26.33	170.5	0.093	
75	4.94	33.31	26.37	167.6	0.135	
100	4.75	33.36	26.43	162.0	0.176	
150	4.27	33.39	26.50	155.2	0.255	
200	3.86	33.47	26.61	145.5	0.330	
250	3.91	33.64	26.74	133.6	0.400	

MV PIONEER
STATION 68

53-00 N 178-30 W 25 JUL 1958 0633-0759 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 120 14 KTS SEA 2
SWELL 120 AMT 1 BAR 1005 MBS DRY 07.8 WET 06.9 BT 164

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.90	33.08	25.94	
10	7.50	33.06	25.85	.603
25	7.28	33.05	25.87	.616
50	4.25	33.11	26.28	.643
74	3.50	33.16	26.40	.604
99	3.57	33.22	26.44	.576
124	4.06	33.32	26.47	.502
148	3.99	33.40	26.54	.454
198	3.68	33.48	26.63	.441
247	3.91	33.64	26.74	.293
296	3.92	33.75	26.82	.214
391	3.67	33.90	26.97	.166
489	3.54	34.06	27.11	.091
685	3.33	34.20	27.24	.058
1028	2.85	34.35	27.40	.049

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	6.90	33.08	25.94	207.0	0.000	
10	7.50	33.06	25.85	216.4	0.021	.603
20	7.49	33.05	25.84	217.2	0.043	.611
30	6.49	33.06	25.98	203.7	0.064	.627
50	4.25	33.11	26.28	175.2	0.102	.643
75	3.49	33.16	26.40	164.4	0.144	.604
100	3.60	33.22	26.43	161.1	0.185	.573
150	3.97	33.40	26.54	151.5	0.263	.456
200	3.69	33.49	26.64	142.3	0.336	.434
250	3.91	33.65	26.74	132.9	0.405	.287
300	3.91	33.76	26.83	125.0	0.469	.212
400	3.66	33.92	26.98	111.2	0.587	.157
500	3.53	34.07	27.12	99.4	0.692	.089
600	3.43	34.14	27.18	93.9	0.789	.070
700	3.31	34.21	27.25	88.1	0.880	.056
800	3.18	34.26	27.30	83.7	0.966	.048
1000	2.89	34.34	27.39	75.9	1.126	.047

MV PIONEER
STATION 69

52-59 N 177-35 W 26 JUL 1958 0105 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 135 18 KTS SEA 3
SWELL 140 AMT 1 BAR 1003 MBS DRY 08.9 WET 07.5 BT 166

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.40	33.12	25.91	
10	7.88	33.11	25.83	
25	7.20	33.12	25.93	
49	4.73	33.21	26.31	
74	3.93	33.22	26.40	
98	4.09	33.30	26.45	
122	4.05	33.32	26.47	
146	3.70	33.32	26.50	
195	2.95	33.30	26.56	
244	3.80	33.50	26.64	
317	3.85	33.71	26.80	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	7.40	33.12	25.91	210.5	0.000	
10	7.88	33.11	25.83	217.9	0.021	
20	7.50	33.11	25.88	212.9	0.043	
30	6.55	33.15	26.04	197.7	0.064	
50	4.68	33.21	26.32	172.1	0.101	
75	3.94	33.22	26.40	164.1	0.143	
100	4.10	33.30	26.45	159.9	0.184	
150	3.58	33.31	26.51	154.5	0.263	
200	3.07	33.32	26.56	149.3	0.339	
250	3.86	33.52	26.65	142.1	0.412	
300	3.97	33.67	26.75	132.4	0.481	

MV PIONEER
STATION 70

53-01 N 176-54 W 26 JUL 1958 0650-0750 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 115 15 KTS SEA 3
SWELL 120 AMT 1 BAR 1002 MBS DRY 08.3 WET 06.9 BT 168

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.30	33.07	25.88	
10	7.93	33.06	25.78	.595
25	7.84	33.05	25.79	.603
50	4.18	33.09	26.27	.628
74	3.85	33.11	26.32	.612
99	3.70	33.12	26.34	.598
124	3.62	33.15	26.38	.578
148	3.53	33.21	26.43	.548
198	3.40	33.28	26.50	.542
247	3.18	33.31	26.54	.538
296	3.63	33.44	26.61	.429
393	3.93	33.77	26.84	.212
491	3.70	33.93	26.99	.129
688	3.40	34.14	27.18	.063
1033	2.90	34.33	27.38	.047

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	7.30	33.07	25.88	212.9	0.000	
10	7.93	33.06	25.78	222.3	0.022	.595
20	7.90	33.05	25.78	222.8	0.044	.600
30	7.70	33.06	25.82	219.4	0.066	.611
50	4.18	33.09	26.27	176.1	0.106	.628
75	3.84	33.11	26.32	171.5	0.149	.612
100	3.70	33.12	26.34	169.5	0.192	.597
150	3.53	33.21	26.43	161.5	0.275	.548
200	3.38	33.28	26.50	155.2	0.354	.544
250	3.21	33.32	26.55	150.9	0.431	.531
300	3.65	33.46	26.62	144.9	0.505	.417
400	3.91	33.78	26.85	124.3	0.640	.205
500	3.69	33.94	27.00	110.8	0.758	.125
600	3.53	34.06	27.11	100.9	0.864	.087
700	3.38	34.15	27.19	93.3	0.961	.060
800	3.23	34.23	27.27	86.5	1.051	.044
1000	2.95	34.32	27.37	78.0	1.216	.043

MV PIONEER
STATION 71

53-00 N 176-04 W 27 JUL 1958 0049 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 065 08 KTS SEA 2
SWELL 070 AMT 1 BAR 1000 MBS DRY 10.6 WET 09.2 BT 170

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.90	33.13	25.84	
10	8.15	33.12	25.80	
25	7.26	33.08	25.89	
50	4.62	33.12	26.25	
74	3.93	33.12	26.32	
99	3.74	33.17	26.38	
124	3.52	33.22	26.44	
148	3.40	33.25	26.48	
198	3.19	33.31	26.54	
247	3.75	33.49	26.63	
321	3.74	33.67	26.78	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	7.90	33.13	25.84	216.5	0.000	
10	8.15	33.12	25.80	220.9	0.022	
20	7.61	33.09	25.85	215.8	0.044	
30	6.58	33.09	25.99	202.6	0.065	
50	4.62	33.12	26.25	178.2	0.103	
75	3.92	33.12	26.32	171.5	0.147	
100	3.73	33.17	26.38	166.1	0.189	
150	3.38	33.25	26.48	157.1	0.270	
200	3.22	33.32	26.55	150.7	0.347	
250	3.77	33.50	26.64	142.7	0.420	
300	3.85	33.63	26.73	134.1	0.489	

MV PIONEER
STATION 72

52-58 N 175-13 W 27 JUL 1958 0642-0740 GCT
WEATHER 44 CLOUDS 6 AMT 9 WIND 010 04 KTS SEA 1
SWELL 050 AMT 1 BAR 0999 MBS DRY 08.3 WET 08.1 BT 172

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.70	33.10	25.85	
10	7.74	33.10	25.84	.600
25	7.44	33.10	25.88	.604
50	4.80	33.18	26.28	.599
74	3.49	33.21	26.44	.618
99	3.46	33.25	26.47	.575
123	3.26	33.30	26.53	.562
148	3.22	33.32	26.55	.527
197	3.64	33.47	26.63	.402
246	3.74	33.59	26.71	.308
295	3.82	33.93	26.98	.199
392	3.69	33.98	27.03	.113
490	3.54	34.07	27.11	.082
687	3.26	34.21	27.25	.054
1032	2.78	34.35	27.41	.045

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	7.70	33.10	25.85	216.0	0.000	
10	7.74	33.10	25.84	216.7	0.022	.600
20	7.65	33.10	25.86	215.6	0.044	.603
30	6.81	33.12	25.99	203.3	0.065	.601
50	4.80	33.18	26.28	175.6	0.103	.599
75	3.49	33.21	26.44	160.7	0.145	.616
100	3.45	33.25	26.47	157.4	0.185	.575
150	3.24	33.33	26.55	149.8	0.262	.521
200	3.65	33.47	26.63	143.4	0.335	.397
250	3.75	33.63	26.74	132.8	0.404	.297
300	3.81	33.93	26.98	111.3	0.465	.193
400	3.68	33.99	27.04	106.2	0.574	.110
500	3.53	34.08	27.12	98.7	0.676	.080
600	3.38	34.15	27.19	92.6	0.772	.064
700	3.24	34.22	27.26	86.7	0.862	.053
800	3.10	34.27	27.32	82.1	0.946	.045
1000	2.82	34.34	27.40	75.2	1.103	.044

MV PIONEER
STATION 73

52-38 N 175-45 W 28 JUL 1958 0113 GCT
WEATHER 44 CLOUDS 6 AMT 9 WIND 355 02 KTS SEA 1
SWELL 360 AMT 1 BAR 1001 MBS DRY 09.7 WET 08.9 BT 174

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.00	33.13	25.83	
10	7.92	33.13	25.84	
24	7.25	33.13	25.93	
48	5.26	33.21	26.25	
73	4.32	33.25	26.39	
97	3.70	33.25	26.45	
121	3.44	33.28	26.50	
146	3.22	33.30	26.53	
175	3.40	33.41	26.60	
244	3.85	33.62	26.73	
316	3.88	33.83	26.89	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	8.00	33.13	25.83	217.9	0.000	
10	7.92	33.13	25.84	216.9	0.022	
20	7.48	33.13	25.90	211.1	0.043	
30	6.65	33.15	26.03	199.0	0.064	
50	5.17	33.21	26.26	177.3	0.102	
75	4.25	33.25	26.39	164.9	0.145	
100	3.66	33.25	26.45	159.4	0.186	
150	3.24	33.32	26.55	150.6	0.263	
200	3.61	33.49	26.65	141.6	0.336	
250	3.87	33.64	26.74	133.2	0.405	
300	3.91	33.78	26.85	123.5	0.469	

MV PIONEER
STATION 74

52-22 N 176-17 W 28 JUL 1958 0635-0735 GCT
WEATHER 44 CLOUDS 6 AMT 9 WIND 315 02 KTS SEA 1
SWELL 360 AMT 1 BAR 1001 MBS DRY 08.3 WET 08.1 BT 176

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.60	33.12	25.88	
10	7.80	33.12	25.85	.599
25	7.52	33.13	25.90	.609
50	5.20	33.17	26.23	.622
74	3.90	33.21	26.40	.600
99	3.40	33.22	26.45	.598
124	3.36	33.28	26.50	.578
149	3.07	33.29	26.54	.566
198	3.29	33.40	26.61	.447
248	3.80	33.60	26.72	.305
297	3.83	33.75	26.83	.217
390	3.72	33.91	26.97	.135
488	3.58	34.02	27.07	.100
684	3.28	34.20	27.24	.060
1025	2.78	34.35	27.41	.050

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	7.60	33.12	25.88	213.2	0.000	
10	7.80	33.12	25.85	216.0	0.021	.599
20	7.71	33.13	25.87	214.2	0.043	.606
30	6.98	33.14	25.98	203.9	0.064	.615
50	5.20	33.17	26.23	180.7	0.102	.622
75	3.87	33.21	26.40	164.2	0.145	.600
100	3.40	33.22	26.45	159.3	0.185	.597
150	3.07	33.29	26.54	151.3	0.263	.564
200	3.32	33.41	26.61	144.8	0.337	.440
250	3.80	33.61	26.72	134.8	0.407	.301
300	3.83	33.76	26.84	124.2	0.472	.214
400	3.71	33.92	26.98	111.8	0.590	.131
500	3.56	34.03	27.08	102.7	0.697	.097
600	3.41	34.13	27.18	94.4	0.796	.074
700	3.26	34.21	27.25	87.6	0.887	.058
800	3.11	34.27	27.31	82.2	0.972	.048
1000	2.82	34.35	27.40	74.4	1.129	.048

MV PIONEER
STATION 75

51-40 N 175-00 W 05 AUG 1958 0527-0546 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 270 02 KTS SEA 2
SWELL 260 AMT 2 BAR 1009 MBS DRY 08.1 WET 07.5 BT 178

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	5.80	33.15	26.14	
10	6.05	33.15	26.11	.567
25	5.89	33.21	26.18	.550
50	5.40	33.26	26.27	.450
75	5.04	33.32	26.36	.363
100	4.96	33.39	26.43	.354
125	4.84	33.40	26.45	.350
150	4.67	33.48	26.53	.333
200	4.58	33.58	26.62	.283
250	4.20	33.79	26.83	.177
316	4.05	33.96	26.98	.095

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	5.80	33.15	26.14	188.4	0.000	
10	6.05	33.15	26.11	191.4	0.019	.567
20	5.95	33.19	26.15	187.4	0.038	.559
30	5.78	33.22	26.20	183.3	0.057	.529
50	5.40	33.26	26.27	176.1	0.093	.450
75	5.04	33.32	26.36	167.9	0.136	.363
100	4.96	33.39	26.43	162.0	0.177	.354
150	4.67	33.48	26.53	152.7	0.256	.333
200	4.58	33.58	26.62	144.7	0.330	.283
250	4.20	33.79	26.83	125.4	0.398	.177
300	4.05	33.93	26.95	113.7	0.458	.109

MV PIONEER
STATION 76

51-30 N 175-00 W 05 AUG 1958 0818-0910 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 270 07 KTS SEA 1
SWELL 260 AMT 1 BAR 1011 MBS DRY 08.6 WET 08.6 BT 179

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.50	32.40	25.18	
10	8.71	32.40	25.15	.583
25	8.26	32.44	25.25	.583
50	5.35	32.82	25.93	.539
74	4.72	33.12	26.24	.453
99	4.52	33.49	26.55	.320
124	4.30	33.67	26.72	.258
149	4.12	33.73	26.79	.192
198	4.17	33.91	26.92	.104
247	4.12	34.00	27.00	.064
296	3.92	34.05	27.06	.052
384	3.67	34.13	27.15	.041
482	3.50	34.22	27.24	.040
679	3.24	34.33	27.35	.035
1024	2.68	34.43	27.48	.051

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	8.50	32.40	25.18	279.3	0.000	
10	8.71	32.40	25.15	282.4	0.028	.583
20	8.52	32.41	25.19	279.1	0.056	.585
30	7.49	32.52	25.42	256.9	0.083	.578
50	5.35	32.82	25.93	208.6	0.130	.539
75	4.71	33.14	26.26	177.9	0.178	.446
100	4.51	33.50	26.56	149.0	0.219	.318
150	4.12	33.73	26.79	128.2	0.288	.190
200	4.17	33.91	26.92	115.6	0.349	.102
250	4.11	34.00	27.00	108.7	0.405	.063
300	3.91	34.05	27.06	103.3	0.458	.051
400	3.64	34.15	27.17	93.8	0.557	.041
500	3.48	34.23	27.25	87.0	0.647	.039
600	3.35	34.29	27.31	81.9	0.731	.036
700	3.21	34.34	27.36	77.4	0.811	.035
800	3.06	34.38	27.41	73.5	0.886	.037
1000	2.72	34.43	27.48	67.4	1.027	.049

MV PIONEER
STATION 77

50-45 N 175-00 W 06 AUG 1958 0045 GCT
WEATHER 51 CLOUDS 6 AMT 9 WIND 200 04 KTS SEA 1
SWELL 230 AMT 1 BAR 1015 MBS DRY 09.7 WET 09.4 BT 181

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.60	32.56	25.29	
10	9.05	32.56	25.22	.580
25	8.84	32.57	25.26	.587
50	4.85	32.82	25.99	.592
75	4.10	33.09	26.28	.495
99	4.19	33.63	26.70	.233
124	4.13	33.84	26.87	.144
149	4.07	33.95	26.97	.078
198	4.02	34.00	27.01	.049
247	3.86	34.07	27.08	.045
321	3.71	34.11	27.13	.051

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	8.60	32.56	25.29	268.8	0.000	
10	9.05	32.56	25.22	275.6	0.027	.580
20	9.00	32.57	25.24	274.2	0.054	.585
30	8.10	32.61	25.41	258.5	0.081	.596
50	4.85	32.82	25.99	203.2	0.127	.592
75	4.10	33.09	26.28	175.5	0.174	.495
100	4.19	33.64	26.71	135.2	0.213	.229
150	4.07	33.95	26.97	111.2	0.275	.077
200	4.01	34.00	27.01	107.2	0.330	.049
250	3.85	34.07	27.08	100.8	0.382	.045
300	3.74	34.11	27.13	97.1	0.431	.048

MV PIONEER
STATION 78

50-00 N 175-00 W 06 AUG 1958 0817-0919 GCT
WEATHER 41 CLOUDS 6 AMT 7 WIND 270 04 KTS SEA 1
SWELL 230 AMT 1 BAR 1017 MBS DRY 08.9 WET 08.9 BT 183

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.50	32.54	25.29	
10	9.00	32.54	25.22	.585
25	8.94	32.54	25.23	.585
50	5.78	32.89	25.94	.629
74	3.71	33.09	26.32	.632
99	3.18	33.18	26.44	.603
124	3.28	33.44	26.64	.455
148	3.35	33.69	26.83	.319
198	3.25	33.81	26.94	.234
247	3.34	33.91	27.01	.170
297	3.40	34.00	27.07	.127
393	3.40	34.10	27.15	.091
492	3.35	34.19	27.23	.070
689	3.08	34.31	27.35	.063
1034	2.59	34.46	27.51	.066

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	8.50	32.54	25.29	268.9	0.000	
10	9.00	32.54	25.22	276.3	0.027	.585
20	8.98	32.54	25.22	276.2	0.055	.585
30	8.60	32.58	25.31	267.8	0.082	.593
50	5.78	32.89	25.94	208.2	0.130	.629
75	3.68	33.09	26.32	171.5	0.177	.633
100	3.18	33.19	26.45	159.5	0.218	.597
150	3.34	33.70	26.84	122.9	0.289	.315
200	3.25	33.81	26.94	114.1	0.348	.231
250	3.34	33.92	27.01	107.0	0.403	.167
300	3.40	34.00	27.07	101.9	0.455	.126
400	3.40	34.11	27.16	94.4	0.553	.089
500	3.34	34.20	27.24	87.8	0.644	.070
600	3.20	34.26	27.30	82.6	0.729	.065
700	3.06	34.32	27.36	77.3	0.809	.063
800	2.92	34.37	27.41	72.8	0.884	.062
1000	2.64	34.45	27.50	65.1	1.022	.065

MV PIONEER
STATION 79

49-30 N 175-00 W 07 AUG 1958 0013 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 160 08 KTS SEA 1
SWELL 200 AMT 1 BAR 1023 MBS DRY 10.3 WET 09.7 BT 185

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	9.00	32.67	25.32	
10	9.07	32.67	25.31	.586
24	9.03	32.67	25.31	.597
49	5.07	32.93	26.05	.602
73	4.33	33.14	26.30	.525
98	3.81	33.22	26.41	.522
122	3.68	33.35	26.53	.473
146	3.55	33.55	26.70	.379
195	3.28	33.78	26.91	.251
244	3.34	33.87	26.97	.188
317	3.50	34.01	27.07	.106

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	9.00	32.67	25.32	266.5	0.000	
10	9.07	32.67	25.31	267.7	0.027	.586
20	9.07	32.67	25.31	267.9	0.054	.594
30	8.90	32.70	25.36	263.3	0.081	.606
50	5.03	32.94	26.06	196.1	0.127	.597
75	4.27	33.14	26.30	173.4	0.173	.527
100	3.80	33.23	26.42	162.2	0.215	.520
150	3.52	33.57	26.72	134.3	0.289	.366
200	3.28	33.79	26.92	115.9	0.352	.244
250	3.35	33.88	26.98	110.1	0.409	.181
300	3.46	33.98	27.05	104.0	0.463	.124

MV PIONEER
STATION 80

49-00 N 175-00 W 07 AUG 1958 0522-0648 GCT
WEATHER 44 CLOUDS 6 AMT 9 WIND 170 04 KTS SEA 1
SWELL 190 AMT 1 BAR 1024 MBS DRY 10.0 WET 10.0 BT 187

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	9.10	32.71	25.33	
10	9.18	32.71	25.32	.589
25	9.04	32.72	25.35	.597
50	5.24	32.87	25.98	.634
74	3.96	32.95	26.18	.630
100	3.28	33.06	26.34	.621
117	3.26	33.12	26.39	.596
159	3.50	33.56	26.71	.348
196	3.35	33.78	26.90	.243
289	3.56	33.99	27.05	
392	3.55	34.09	27.13	.066
490	3.40	34.17	27.21	.061
687	3.11	34.32	27.35	.054
1030	2.60	34.43	27.49	.055

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	9.10	32.71	25.33	265.0	0.000	
10	9.18	32.71	25.32	266.4	0.027	.589
20	9.15	32.71	25.33	266.1	0.054	.593
30	8.80	32.76	25.42	257.4	0.080	.608
50	5.24	32.87	25.98	203.6	0.126	.634
75	3.92	32.95	26.19	184.3	0.174	.630
100	3.28	33.06	26.34	170.2	0.218	.621
150	3.49	33.48	26.65	140.8	0.296	.390
200	3.36	33.79	26.91	116.6	0.360	.237
250	3.50	33.92	27.00	108.6	0.416	.172
300	3.57	34.00	27.06	103.6	0.469	.121
400	3.54	34.10	27.14	96.6	0.569	.066
500	3.39	34.18	27.22	89.8	0.662	.061
600	3.24	34.26	27.29	83.0	0.748	.056
700	3.09	34.33	27.36	76.9	0.828	.054
800	2.94	34.38	27.42	72.3	0.903	.052
1000	2.64	34.43	27.48	66.6	1.042	.054

MV PIONEER
STATION 81

49-59 N 173-32 W 08 AUG 1958 0638-0651 GCT
WEATHER 47 CLOUDS - AMT - WIND 230 14 KTS SEA 4
SWELL 220 AMT 2 BAR 1021 MBS DRY 10.6 WET 10.3 BT 190

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.80	32.62	25.31	
10	9.31	32.60	25.21	.590
25	8.87	32.64	25.31	.597
50	5.12	32.86	25.99	.591
75	4.23	33.18	26.34	.488
100	3.72	33.38	26.55	.430
125	4.02	33.57	26.67	.323
149	4.20	33.80	26.83	.202
196	3.79	33.88	26.94	.146
245	3.82	34.01	27.04	.081
319	3.55	34.06	27.11	.075

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	8.80	32.62	25.31	267.2	0.000	
10	9.31	32.60	25.21	276.5	0.027	.590
20	9.17	32.62	25.25	273.1	0.054	.596
30	7.89	32.68	25.49	250.3	0.080	.604
50	5.12	32.86	25.99	203.1	0.125	.591
75	4.23	33.18	26.34	170.0	0.172	.488
100	3.72	33.38	26.55	150.2	0.212	.430
150	4.19	33.80	26.84	123.6	0.280	.201
200	3.80	33.89	26.95	113.4	0.339	.139
250	3.81	34.02	27.05	104.1	0.393	.077
300	3.66	34.06	27.10	100.0	0.444	.066

MV PIONEER
STATION 82

49-37 N 171-40 W 08 AUG 1958 1810 GCT
WEATHER 44 CLOUDS - AMT 0 WIND 210 10 KTS SEA 3
SWELL 210 AMT 1 BAR 1020 MBS DRY 10.6 WET 10.3 BT 193

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.80	32.64	25.32	
9	9.27	32.63	25.24	.601
23	8.86	32.65	25.32	.594
47	5.00	32.68	25.86	.619
71	4.00	32.96	26.19	.621
94	3.40	33.14	26.39	.546
118	3.65	33.51	26.66	.360
142	3.60	33.78	26.88	.228
190	3.58	33.90	26.98	.141
238	3.60	33.96	27.02	.106
309	3.60	34.05	27.09	.076

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	8.80	32.64	25.32	265.8	0.000	
10	9.28	32.63	25.24	273.8	0.027	.600
20	9.06	32.64	25.28	269.9	0.054	.594
30	7.44	32.66	25.54	245.8	0.080	.604
50	4.85	32.72	25.91	210.7	0.126	.624
75	3.84	32.98	26.22	181.2	0.175	.615
100	3.49	33.24	26.46	158.6	0.217	.494
150	3.59	33.80	26.90	117.7	0.286	.210
200	3.59	33.91	26.98	109.8	0.343	.133
250	3.60	33.98	27.04	105.0	0.397	.099
300	3.60	34.04	27.09	100.9	0.448	.078

MV PIONEER
STATION 83

49-00 N 170-00 W 09 AUG 1958 0543-0642 GCT
WEATHER 44 CLOUDS 6 AMT 9 WIND 225 17 KTS SEA 3
SWELL 230 AMT 1 BAR 1020 MBS DRY 11.1 WET 10.6 BT 195

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	9.20	32.72	25.33	
10	9.47	32.72	25.28	.596
25	8.98	32.73	25.37	.590
49	5.89	32.84	25.88	
74	4.45	32.93	26.12	.630
98	3.98	33.04	26.25	.595
122	3.68	33.44	26.60	.448
146	3.64	33.76	26.86	.223
195	3.60	33.87	26.95	.154
244	3.62	33.94	27.00	.116
293	3.61	34.03	27.08	.092
371	3.55	34.12	27.15	.065
465	3.48	34.18	27.21	.056
653	3.22	34.30	27.33	.045
982	2.69	34.44	27.49	.054

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
	0	9.20	32.72	25.33	265.8	0.000	
	10	9.47	32.72	25.28	270.0	0.027	.596
	20	9.27	32.72	25.31	267.2	0.054	.591
	30	8.20	32.75	25.50	249.5	0.080	.601
	50	5.81	32.84	25.89	212.3	0.126	.629
	75	4.43	32.93	26.12	190.8	0.176	.631
	100	3.95	33.08	26.29	174.9	0.222	.586
	150	3.63	33.77	26.87	120.3	0.296	.216
	200	3.60	33.88	26.96	112.2	0.354	.149
	250	3.62	33.95	27.01	107.5	0.409	.113
	300	3.60	34.04	27.09	100.9	0.461	.089
	400	3.53	34.14	27.17	93.5	0.558	.062
	500	3.43	34.20	27.23	88.7	0.649	.053
	600	3.30	34.27	27.30	82.9	0.735	.047
	700	3.17	34.31	27.34	79.2	0.816	.045
	800	3.03	34.35	27.39	75.4	0.893	.047
*	1000	2.65	34.45	27.50	65.2	1.034	.055

MV PIONEER
STATION 84

49-29 N 170-00 W 10 AUG 1958 0041 GCT
WEATHER 44 CLOUDS 6 AMT 9 WIND 225 13 KTS SEA 2
SWELL 240 AMT 1 BAR 1020 MBS DRY 11.7 WET 10.8 BT 197

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	9.30	32.58	25.20	
10	9.62	32.59	25.16	.592
25	8.90	32.61	25.29	.589
50	5.00	32.89	26.03	.637
75	4.47	32.94	26.12	.632
100	4.00	33.00	26.22	.604
110	3.68	33.19	26.40	.512
141	3.84	33.73	26.82	.234
191	3.55	33.85	26.94	.170
244	3.65	33.96	27.02	.106

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	9.30	32.58	25.20	277.7	0.000	
10	9.62	32.59	25.16	282.0	0.028	.592
20	9.28	32.59	25.21	277.0	0.056	.587
30	7.85	32.68	25.50	249.8	0.082	.603
50	5.00	32.89	26.03	199.5	0.127	.637
75	4.47	32.94	26.12	190.4	0.176	.632
100	4.00	33.00	26.22	181.4	0.222	.604
150	3.76	33.75	26.84	123.1	0.298	.222
200	3.54	33.87	26.96	112.3	0.357	.159

MV PIONEER
STATION 85

50-00 N 170-00 W 10 AUG 1958 0557-0650 GCT
WEATHER 44 CLOUDS 6 AMT 9 WIND 210 15 KTS SEA 2
SWELL 230 AMT 1 BAR 1020 MBS DRY 10.6 WET 10.3 BT 199

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	9.20	32.60	25.23	
10	9.75	32.60	25.14	.598
25	9.22	32.61	25.24	.612
49	4.89	32.88	26.03	.583
74	4.15	33.05	26.24	.536
98	4.20	33.38	26.50	.372
123	4.27	33.73	26.77	.198
147	4.23	33.87	26.89	.139
197	4.08	33.96	26.97	.070
246	3.96	34.04	27.05	.046
320	3.88	34.08	27.09	.040
388	3.54	34.15	27.18	.060
485	3.40	34.20	27.23	.054
679	3.15	34.33	27.36	.042
1020	2.62	34.45	27.50	.054

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	9.20	32.60	25.23	274.7	0.000	
10	9.75	32.60	25.14	283.3	0.028	.598
20	9.58	32.59	25.16	281.5	0.056	.610
30	8.03	32.67	25.46	253.0	0.083	.607
50	4.84	32.88	26.04	198.6	0.128	.584
75	4.15	33.06	26.25	178.2	0.175	.529
100	4.21	33.42	26.53	151.9	0.216	.354
150	4.22	33.88	26.90	117.9	0.283	.134
200	4.07	33.97	26.98	110.1	0.340	.068
250	3.96	34.04	27.05	104.1	0.394	.045
300	3.93	34.07	27.08	102.0	0.446	.039
400	3.52	34.16	27.19	91.9	0.543	.059
500	3.38	34.21	27.24	87.4	0.633	.053
600	3.26	34.28	27.31	81.7	0.718	.045
700	3.12	34.34	27.37	76.5	0.797	.042
800	2.98	34.39	27.42	71.9	0.871	.041
1000	2.65	34.45	27.50	65.2	1.008	.052

MV PIONEER
STATION 86

51-00 N 170-00 W 11 AUG 1958 0632-0726 GCT
WEATHER 44 CLOUDS 6 AMT 9 WIND 225 20 KTS SEA 4
SWELL 230 AMT 4 BAR 1010 MBS DRY 10.6 WET 10.3 BT 203

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	9.50	32.44	25.06	
10	9.98	32.44	24.98	.567
25	9.78	32.48	25.04	.583
50	4.90	32.90	26.05	.576
74	3.86	33.11	26.32	.531
99	4.00	33.38	26.52	.405
124	3.90	33.62	26.72	.282
148	3.82	33.77	26.85	.224
198	4.00	33.94	26.97	.100
247	3.95	34.01	27.03	.064
296	3.75	34.07	27.09	.061
393	3.68	34.15	27.16	.040
490	3.52	34.22	27.24	.037
687	3.18	34.33	27.36	.036
1031	2.63	34.43	27.49	.050

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	9.50	32.44	25.06	291.1	0.000	
10	9.98	32.44	24.98	298.7	0.029	.567
20	9.92	32.45	25.00	297.2	0.059	.579
30	8.49	32.58	25.33	266.2	0.087	.585
50	4.90	32.90	26.05	197.7	0.133	.576
75	3.87	33.12	26.33	171.0	0.179	.526
100	4.00	33.39	26.53	152.1	0.219	.399
150	3.83	33.78	26.86	121.5	0.287	.217
200	4.00	33.94	26.97	111.6	0.345	.098
250	3.93	34.01	27.03	106.1	0.399	.064
300	3.75	34.07	27.09	100.2	0.451	.060
400	3.67	34.16	27.17	93.4	0.548	.040
500	3.50	34.23	27.25	87.2	0.638	.037
600	3.33	34.29	27.31	81.7	0.722	.036
700	3.16	34.34	27.37	76.9	0.801	.036
800	2.99	34.38	27.41	72.8	0.876	.038
1000	2.68	34.43	27.48	67.0	1.016	.048

MV PIONEER
STATION 87

52-00 N 170-00 W 13 AUG 1958 0025-0123 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 260 25 KTS SEA 4
SWELL 260 AMT 3 BAR 1013 MBS DRY 08.3 WET 07.9 BT 208

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	9.20	32.17	24.90	
10	9.80	32.17	24.80	.600
24	9.40	32.21	24.90	.602
49	6.02	32.84	25.87	.595
73	4.74	32.91	26.07	.575
98	4.25	33.10	26.27	.430
122	4.05	33.58	26.67	.247
146	4.08	33.78	26.83	.161
195	3.98	33.95	26.98	.060
244	3.98	34.00	27.02	.045
293	3.91	34.05	27.06	.049
394	3.83	34.14	27.14	.049
492	3.63	34.19	27.20	.039
690	3.28	34.30	27.32	.035
1035	2.70	34.42	27.47	.048

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	9.20	32.17	24.90	306.6	0.000	
10	9.80	32.17	24.80	315.9	0.031	.600
20	9.62	32.18	24.84	312.6	0.062	.602
30	8.40	32.41	25.21	277.6	0.092	.602
50	5.95	32.84	25.88	213.9	0.141	.596
75	4.69	32.91	26.08	194.9	0.192	.565
100	4.22	33.15	26.32	172.3	0.238	.411
150	4.07	33.80	26.85	122.4	0.312	.150
200	3.98	33.96	26.98	109.9	0.370	.058
250	3.97	34.01	27.02	106.5	0.424	.046
300	3.91	34.06	27.07	102.5	0.476	.049
400	3.82	34.14	27.14	96.4	0.575	.048
500	3.62	34.19	27.20	91.4	0.669	.039
600	3.44	34.25	27.27	85.8	0.758	.036
700	3.26	34.30	27.32	80.9	0.841	.035
800	3.09	34.35	27.38	76.1	0.919	.036
1000	2.76	34.41	27.46	69.3	1.064	.046

MV PIONEER
STATION 88

52-42 N 166-46 W 14 AUG 1958 0040 GCT
WEATHER 01 CLOUDS 3 AMT 5 WIND 270 26 KTS SEA 4
SWELL 270 AMT 3 BAR 1010 MBS DRY 10.8 WET 09.2 BT 213

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	10.20	32.18	24.74	
10	10.82	32.15	24.61	.586
24	10.73	32.17	24.64	.570
49	6.21	32.82	25.83	.600
73	4.66	32.95	26.11	.561
98	4.08	33.31	26.46	.392
122	4.08	33.69	26.76	.191
146	4.08	33.87	26.90	.101
195	4.01	33.96	26.98	.050
243	3.95	34.04	27.05	.035
316	3.85	34.10	27.11	.041

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	10.20	32.18	24.74	321.3	0.000	
10	10.82	32.15	24.61	333.8	0.033	.586
20	10.82	32.16	24.62	333.3	0.066	.572
30	10.00	32.22	24.81	315.7	0.098	.572
50	6.13	32.82	25.84	217.5	0.151	.601
75	4.59	32.98	26.14	188.7	0.202	.549
100	4.08	33.35	26.49	155.9	0.245	.371
150	4.07	33.88	26.91	116.4	0.313	.095
200	4.00	33.97	26.99	109.4	0.369	.048
250	3.94	34.05	27.06	103.2	0.422	.034
300	3.87	34.09	27.10	99.9	0.473	.037

MV PIONEER
STATION 89

52-51 N 166-00 W 14 AUG 1958 0623-0721 GCT
WEATHER 01 CLOUDS 3 AMT 1 WIND 270 28 KTS SEA 4
SWELL 270 AMT 3 BAR 1007 MBS DRY 09.4 WET 08.3 BT 215

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	9.90	32.12	24.74	
10	10.68	32.10	24.60	.577
25	10.62	32.11	24.62	.594
50	5.21	32.87	25.99	.595
74	4.20	33.11	26.29	.488
99	4.08	33.41	26.54	.355
123	4.08	33.73	26.79	.180
148	4.08	33.88	26.91	.087
197	3.98	33.99	27.01	.039
246	3.94	34.05	27.06	.032
295	3.88	34.08	27.09	.033
388	3.72	34.14	27.15	.035
485	3.49	34.23	27.25	.049
678	3.18	34.32	27.35	.031
1018	2.63	34.44	27.49	.055

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	9.90	32.12	24.74	321.0	0.000	
10	10.68	32.10	24.60	335.2	0.033	.577
20	10.66	32.10	24.60	335.0	0.067	.590
30	10.00	32.16	24.76	320.2	0.100	.594
50	5.21	32.87	25.99	203.3	0.152	.595
75	4.19	33.12	26.30	174.1	0.199	.484
100	4.08	33.43	26.55	149.9	0.239	.346
150	4.07	33.89	26.92	115.7	0.305	.084
200	3.98	33.99	27.01	107.7	0.361	.038
250	3.94	34.05	27.06	103.2	0.414	.032
300	3.87	34.08	27.09	100.6	0.465	.033
400	3.69	34.15	27.16	94.3	0.562	.038
500	3.47	34.24	27.26	86.1	0.652	.047
600	3.31	34.29	27.31	81.5	0.736	.036
700	3.14	34.33	27.36	77.4	0.815	.030
800	2.98	34.37	27.41	73.4	0.890	.031
1000	2.66	34.43	27.48	66.8	1.030	.052

MV PIONEER
STATION 90

53-31 N 165-03 W 16 AUG 1958 0754 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 260 02 KTS SEA 1
SWELL 260 AMT 1 BAR 1008 MBS DRY 09.4 WET 08.6 BT 218

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.40	31.92	24.82	
10	8.89	31.94	24.76	.609
25	8.67	31.97	24.82	.580
50	5.82	32.29	25.46	.494
75	5.82	32.70	25.78	.547
99	5.14	33.01	26.11	.445
124	4.95	33.28	26.34	.356
149	4.81	33.54	26.56	.279
198	4.61	33.85	26.83	.168
247	4.45	33.91	26.89	.126
321	4.19	34.00	26.99	.081

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	8.40	31.92	24.82	313.6	0.000	
10	8.89	31.94	24.76	319.3	0.032	.609
20	8.87	31.95	24.78	318.4	0.064	.592
30	7.87	32.03	24.99	298.5	0.095	.552
50	5.82	32.29	25.46	253.6	0.150	.494
75	5.82	32.70	25.78	223.2	0.210	.547
100	5.13	33.02	26.12	191.6	0.262	.441
150	4.81	33.55	26.57	148.9	0.347	.276
200	4.60	33.85	26.83	124.7	0.415	.166
250	4.44	33.91	26.90	118.9	0.476	.124
300	4.27	33.97	26.96	113.1	0.534	.092

MV PIONEER
STATION 91

54-07 N 160-00 W 19 AUG 1958 0214-0302 GCT
WEATHER 02 CLOUDS 8 AMT 9 WIND 190 06 KTS SEA 1
SWELL 190 AMT 1 BAR 1005 MBS DRY 10.6 WET 09.7 BT 220

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	10.90	32.25	24.68	
10	11.44	32.23	24.56	.558
25	10.76	32.29	24.73	.556
49	6.18	32.69	25.73	.568
74	4.94	32.84	25.99	.551
98	4.65	33.13	26.26	.467
123	4.82	33.46	26.50	.334
147	4.52	33.73	26.74	.229
196	4.41	33.90	26.89	.144
245	4.22	33.96	26.96	.111
294	4.06	34.05	27.05	
387	3.85	34.11	27.12	.043
483	3.74	34.17	27.17	.039
677	3.34	34.29	27.31	.034
1015	2.76	34.41	27.46	.040

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	10.90	32.25	24.68	327.5	0.000	
10	11.44	32.23	24.56	338.3	0.033	.558
20	11.17	32.25	24.63	332.5	0.067	.556
30	9.53	32.39	25.02	295.8	0.098	.561
50	6.11	32.69	25.74	227.0	0.150	.569
75	4.92	32.85	26.00	201.9	0.204	.548
100	4.68	33.16	26.28	176.3	0.251	.455
150	4.52	33.74	26.75	131.6	0.328	.222
200	4.39	33.90	26.89	118.7	0.391	.141
250	4.20	33.97	26.97	111.9	0.449	.107
300	4.04	34.05	27.05	104.6	0.503	.076
400	3.84	34.12	27.13	98.1	0.604	.042
500	3.70	34.18	27.19	93.0	0.700	.038
600	3.49	34.25	27.26	86.3	0.790	.035
700	3.30	34.30	27.32	81.3	0.874	.034
800	3.11	34.35	27.38	76.3	0.953	.034
1000	2.78	34.41	27.46	69.5	1.099	.039

MV PIONEER
STATION 92

53-48 N 160-00 W 19 AUG 1958 2304 GCT
WEATHER 50 CLOUDS 8 AMT 9 WIND 135 10 KTS SEA 2
SWELL 140 AMT 1 BAR 1007 MBS DRY 10.3 WET 10.0 BT 222

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	11.00	32.29	24.69	
10	11.58	32.28	24.58	.559
24	11.16	32.32	24.68	.557
49	5.78	32.83	25.89	.605
73	4.32	32.99	26.18	.542
97	3.95	33.40	26.54	.329
121	4.02	33.75	26.81	.152
145	4.06	33.89	26.92	.074
194	4.00	33.98	27.00	.041
243	3.95	34.04	27.05	.036
316	3.82	34.12	27.13	.035

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	11.00	32.29	24.69	326.2	0.000	
10	11.58	32.28	24.58	337.1	0.033	.559
20	11.47	32.29	24.61	334.6	0.067	.555
30	9.51	32.47	25.08	289.6	0.098	.579
50	5.70	32.83	25.90	211.8	0.148	.605
75	4.27	33.03	26.22	181.7	0.197	.523
100	3.96	33.46	26.59	146.5	0.238	.301
150	4.05	33.90	26.93	114.7	0.303	.069
200	4.00	33.99	27.01	107.9	0.359	.040
250	3.94	34.05	27.06	103.2	0.412	.036
300	3.85	34.10	27.11	98.9	0.463	.035

MV PIONEER
STATION 93

53-30 N 160-00 W 20 AUG 1958 0221-0311 GCT
WEATHER 02 CLOUDS 8 AMT 9 WIND 135 02 KTS SEA 1
SWELL 140 AMT 1 BAR 1007 MBS DRY 11.1 WET 10.3 BT 224

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	11.10	32.56	24.88	
10	11.40	32.54	24.81	.584
25	10.63	32.65	25.03	.551
50	5.60	32.83	25.91	.609
75	4.45	32.93	26.12	.557
99	3.98	33.48	26.60	.281
124	4.08	33.80	26.85	.126
148	4.06	33.93	26.95	.058
197	3.95	34.02	27.03	.030
246	3.91	34.07	27.08	.029
295	3.81	34.12	27.13	.028
393	3.65	34.17	27.18	.032
491	3.47	34.23	27.25	.032
687	3.16	34.33	27.36	.034
1031	2.60	34.44	27.50	.046

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	11.10	32.56	24.88	308.0	0.000	
10	11.40	32.54	24.81	314.8	0.031	.584
20	11.07	32.61	24.93	304.2	0.062	.556
30	9.31	32.69	25.28	270.2	0.091	.571
50	5.60	32.83	25.91	210.6	0.139	.609
75	4.45	32.93	26.12	191.0	0.189	.557
100	3.99	33.50	26.62	143.7	0.231	.273
150	4.05	33.93	26.95	112.5	0.295	.056
200	3.95	34.02	27.03	105.1	0.349	.030
250	3.90	34.07	27.08	101.3	0.401	.029
300	3.80	34.12	27.13	96.9	0.451	.028
400	3.64	34.17	27.18	92.3	0.546	.032
500	3.46	34.24	27.26	86.0	0.635	.032
600	3.30	34.29	27.31	81.4	0.719	.033
700	3.14	34.34	27.37	76.7	0.798	.034
800	2.98	34.38	27.41	72.7	0.873	.037
1000	2.65	34.43	27.48	66.7	1.012	.044

MV PIONEER
STATION 94

52-50 N 160-00 W 21 AUG 1958 0029 GCT
WEATHER 63 CLOUDS 7 AMT 9 WIND 020 18 KTS SEA 4
SWELL 020 AMT 2 BAR 0995 MBS DRY 11.1 WET 11.1 BT 226

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	10.50	32.59	25.01	
10	11.00	32.59	24.92	.562
25	10.98	32.60	24.93	.559
49	6.37	32.79	25.78	.605
74	4.45	32.96	26.14	.546
98	3.98	33.41	26.55	.324
122	4.16	33.79	26.83	.147
146	4.15	33.88	26.90	.102
195	4.02	33.97	26.99	.047
244	3.98	34.04	27.05	.031
317	3.85	34.11	27.12	.033

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	10.50	32.59	25.01	295.8	0.000	
10	11.00	32.59	24.92	304.3	0.030	.562
20	10.99	32.59	24.92	304.3	0.060	.557
30	10.90	32.64	24.98	299.3	0.090	.577
50	6.27	32.79	25.80	221.5	0.142	.606
75	4.42	32.98	26.16	186.9	0.193	.536
100	4.00	33.45	26.58	147.6	0.235	.304
150	4.14	33.89	26.91	116.4	0.301	.096
200	4.02	33.98	27.00	108.8	0.357	.045
250	3.97	34.05	27.06	103.5	0.410	.030
300	3.89	34.10	27.10	99.4	0.461	.030

MV PIONEER
STATION 95

52-10 N 160-00 W 21 AUG 1958 0640 GCT
WEATHER 50 CLOUDS 7 AMT 9 WIND 290 20 KTS SEA 4
SWELL - AMT 9 BAR 0991 MBS DRY 10.6 WET 10.6 BT 228

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	10.00	32.63	25.12	
8	10.46	32.63	25.05	.565
22	10.23	32.68	25.13	.559
45	4.65	32.91	26.08	.564
67	4.09	33.20	26.37	.432
90	4.10	33.53	26.63	.270
113	4.16	33.77	26.81	.153
136	4.14	33.87	26.90	.101
181	4.08	33.98	26.99	.055
225	4.00	34.03	27.04	.038
293	3.83	34.11	27.12	.035

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	10.00	32.63	25.12	284.8	0.000	
10	10.57	32.63	25.03	294.2	0.029	.564
20	10.41	32.67	25.09	288.8	0.058	.559
30	7.71	32.75	25.57	242.7	0.085	.577
50	4.47	32.97	26.15	188.0	0.128	.536
75	4.09	33.32	26.46	158.1	0.171	.371
100	4.14	33.65	26.72	134.0	0.208	.211
150	4.12	33.91	26.93	114.7	0.270	.084
200	4.05	34.00	27.01	107.6	0.326	.046
250	3.94	34.06	27.07	102.4	0.379	.036
* 300	3.81	34.12	27.13	97.0	0.429	.035

MV PIONEER
STATION 96

51-54 N 157-40 W 22 AUG 1958 0633-0653 GCT
WEATHER 03 CLOUDS 8 AMT 8 WIND 180 10 KTS SEA 3
SWELL 230 AMT 3 BAR 1007 MBS DRY 10.0 WET 09.4 BT 232

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	9.50	32.66	25.23	
9	10.02	32.66	25.15	.567
23	9.95	32.65	25.15	.580
47	5.21	32.83	25.96	.635
70	4.26	32.93	26.14	.594
94	3.97	33.53	26.64	.283
117	3.97	33.78	26.84	.171
140	3.90	33.87	26.92	.115
187	3.90	33.96	26.99	.045
234	3.88	34.02	27.04	.032
305	3.74	34.10	27.12	.031

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	9.50	32.66	25.23	274.8	0.000	
10	10.03	32.66	25.14	283.2	0.028	.567
20	10.00	32.65	25.14	283.7	0.056	.575
30	8.17	32.71	25.47	252.0	0.083	.590
50	5.05	32.82	25.97	205.3	0.129	.644
75	4.18	33.08	26.27	177.0	0.177	.513
100	3.98	33.61	26.71	135.4	0.216	.248
150	3.90	33.89	26.94	114.0	0.278	.095
200	3.90	33.98	27.01	107.6	0.333	.040
250	3.86	34.04	27.06	103.1	0.386	.030
300	3.75	34.09	27.11	98.7	0.436	.030

MV PIONEER
STATION 97

51-41 N 155-30 W 22 AUG 1958 1818-1850 GCT
WEATHER 63 CLOUDS 7 AMT 9 WIND 090 26 KTS SEA 4
SWELL 090 AMT 4 BAR 1000 MBS DRY 09.7 WET 09.7 BT 235

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	9.40	32.71	25.29	
9	9.97	32.71	25.19	.565
23	9.93	32.72	25.21	.570
49	5.45	32.84	25.94	.635
66	4.78	32.90	26.06	.603
88	4.06	33.35	26.49	.408
112	3.80	33.68	26.78	.261
135	3.68	33.78	26.87	.219
180	3.62	33.86	26.94	.156
225	3.65	33.94	27.00	.101
270	3.64	34.01	27.06	.074

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
	0	9.40	32.71	25.29	269.5	0.000	
	10	9.98	32.71	25.19	278.7	0.027	.565
	20	9.96	32.71	25.19	278.6	0.055	.567
	30	9.70	32.76	25.28	271.0	0.082	.602
	50	5.29	32.82	25.94	207.9	0.130	.641
	75	4.43	33.10	26.25	178.0	0.178	.516
	100	3.91	33.54	26.66	140.0	0.218	.321
	150	3.65	33.81	26.90	117.5	0.282	.197
	200	3.64	33.90	26.97	111.0	0.339	.128
	250	3.65	33.98	27.03	105.5	0.393	.084
*	300	3.63	34.05	27.09	100.5	0.444	.067

MV PIONEER
STATION 98

50-26 N 147-25 W 24 AUG 1958 1945 GCT
WEATHER 03 CLOUDS 4 AMT 2 WIND 230 14 KTS SEA 3
SWELL 230 AMT 1 BAR 1018 MBS DRY 12.8 WET 11.9 BT 237

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	11.30	32.54	24.83	
10	11.76	32.54	24.75	
25	11.76	32.53	24.74	
49	6.93	32.78	25.70	
74	5.82	32.82	25.88	
98	5.34	32.83	25.94	
122	4.55	33.28	26.38	
146	3.92	33.60	26.70	
195	3.64	33.77	26.87	
294	3.65	33.92	26.98	
517	3.54	34.17	27.19	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	11.30	32.54	24.83	312.8	0.000	
10	11.76	32.54	24.75	321.0	0.032	
20	11.76	32.53	24.74	322.0	0.064	
30	11.76	32.60	24.79	317.0	0.096	
50	6.87	32.78	25.71	229.7	0.151	
75	5.81	32.81	25.87	214.8	0.207	
100	5.27	32.87	25.98	204.4	0.259	
150	3.89	33.62	26.72	134.2	0.344	
200	3.64	33.78	26.87	120.1	0.408	
250	3.65	33.86	26.94	114.5	0.467	
300	3.65	33.93	26.99	109.7	0.523	
400	3.62	34.05	27.09	101.1	0.628	
500	3.55	34.16	27.19	92.9	0.725	

MV PIONEER
STATION 99

49-43 N 146-10 W 25 AUG 1958 0527-0616 GCT
WEATHER 03 CLOUDS 8 AMT 6 WIND 255 06 KTS SEA 2
SWELL 260 AMT 1 BAR 1019 MBS DRY 12.2 WET 11.9 BT 240

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	11.80	32.65	24.82	
10	12.20	32.64	24.74	
25	12.18	32.65	24.75	
50	7.55	32.97	25.77	
75	6.45	33.01	25.95	
100	5.76	33.03	26.05	
124	5.60	33.29	26.27	
149	5.22	33.69	26.63	
199	4.34	33.76	26.79	
248	3.98	33.82	26.87	
298	3.81	33.88	26.94	
390	3.75	34.01	27.05	
488	3.62	34.11	27.14	
683	3.38	34.25	27.27	
1025	2.78	34.38	27.43	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	11.80	32.65	24.82	313.4	0.000	
10	12.20	32.64	24.74	321.5	0.032	
20	12.19	32.64	24.74	321.5	0.064	
30	12.15	32.74	24.83	313.7	0.096	
50	7.55	32.97	25.77	224.4	0.150	
75	6.45	33.01	25.95	207.5	0.204	
100	5.76	33.03	26.05	198.0	0.255	
150	5.20	33.69	26.64	142.8	0.340	
200	4.33	33.76	26.79	128.5	0.408	
250	3.97	33.82	26.87	120.7	0.470	
300	3.81	33.88	26.94	115.0	0.529	
400	3.74	34.02	27.06	104.6	0.639	
500	3.61	34.12	27.15	96.5	0.740	
600	3.49	34.20	27.22	90.1	0.833	
700	3.36	34.26	27.28	84.9	0.920	
800	3.20	34.31	27.34	80.2	1.003	
1000	2.83	34.38	27.43	72.3	1.156	

MV PIONEER
STATION 100

50-24 N 144-05 W 26 AUG 1958 0603 GCT
WEATHER 02 CLOUDS 8 AMT 9 WIND 285 04 KTS SEA 1
SWELL 260 AMT 1 BAR 1018 MBS DRY 12.2 WET 11.1 BT 243

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	12.60	32.62	24.65	
10	13.12	32.60	24.53	
25	12.96	32.62	24.58	
50	7.28	32.81	25.68	
75	5.90	32.86	25.90	
100	5.49	32.94	26.01	
125	5.24	33.25	26.28	
149	4.80	33.67	26.67	
198	4.14	33.77	26.82	
297	3.72	33.88	26.95	
521	3.60	34.14	27.16	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	12.60	32.62	24.65	330.0	0.000	
10	13.12	32.60	24.53	341.4	0.034	
20	13.04	32.61	24.56	339.4	0.068	
30	12.85	32.67	24.64	331.6	0.102	
50	7.28	32.81	25.68	232.7	0.158	
75	5.90	32.86	25.90	212.1	0.214	
100	5.49	32.94	26.01	201.6	0.266	
150	4.78	33.67	26.67	139.6	0.351	
200	4.13	33.77	26.82	125.7	0.417	
250	3.89	33.83	26.89	119.2	0.478	
300	3.71	33.88	26.95	114.0	0.536	
400	3.52	34.00	27.06	103.8	0.645	
500	3.56	34.11	27.14	96.8	0.745	

MV PIONEER
STATION 101

51-00 N 142-00 W 26 AUG 1958 1756 GCT
WEATHER 02 CLOUDS 8 AMT 9 WIND 315 05 KTS SEA 1
SWELL 270 AMT 1 BAR 1018 MBS DRY 13.3 WET 12.2 BT 246

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	13.70	32.61	24.42	
10	14.32	32.59	24.28	
24	14.10	32.61	24.34	
48	8.09	32.82	25.57	
72	6.92	32.81	25.73	
97	6.25	32.90	25.89	
121	5.73	33.32	26.28	
145	5.32	33.58	26.54	
193	4.88	33.76	26.73	
290	4.08	33.87	26.90	
508	3.78	34.12	27.13	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	13.70	32.61	24.42	351.5	0.000	
10	14.32	32.59	24.28	365.3	0.036	
20	14.15	32.60	24.32	361.5	0.072	
30	14.10	32.68	24.40	354.9	0.108	
50	7.97	32.82	25.59	241.3	0.168	
75	6.83	32.80	25.73	228.0	0.227	
100	6.18	32.96	25.94	208.3	0.282	
150	5.27	33.60	26.56	150.3	0.372	
200	4.81	33.77	26.74	132.9	0.443	
250	4.36	33.82	26.83	124.8	0.507	
300	4.02	33.88	26.92	117.2	0.567	
400	3.67	34.00	27.05	105.4	0.678	
500	3.75	34.11	27.13	98.8	0.780	

MV PIONEER
STATION 102

51-30 N 140-00 W 27 AUG 1958 0516-0627 GCT
WEATHER 02 CLOUDS 1 AMT 3 WIND 320 02 KTS SEA 1
SWELL 320 AMT 1 BAR 1017 MBS DRY 12.8 WET 11.4 BT 249

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	14.90	32.43	24.04	
10	15.42	32.41	23.91	
25	15.39	32.41	23.91	
50	8.13	32.57	25.37	
74	7.15	32.69	25.60	
99	6.57	32.84	25.80	
124	5.65	33.24	26.23	
149	5.18	33.53	26.51	
198	4.96	33.77	26.73	
248	4.67	33.87	26.84	
298	4.42	33.93	26.91	
391	4.18	34.02	27.01	
489	4.04	34.08	27.07	
684	3.68	34.24	27.24	
1026	2.90	34.36	27.41	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	14.90	32.43	24.04	388.5	0.000	
10	15.42	32.41	23.91	401.0	0.039	
20	15.40	32.41	23.91	400.8	0.079	
30	15.33	32.44	23.95	397.5	0.119	
50	8.13	32.57	25.37	262.2	0.185	
75	7.13	32.69	25.61	240.1	0.248	
100	6.52	32.86	25.82	219.9	0.305	
150	5.18	33.54	26.52	153.8	0.398	
200	4.95	33.77	26.73	134.5	0.470	
250	4.66	33.87	26.84	124.3	0.535	
300	4.41	33.93	26.91	117.6	0.595	
400	4.17	34.02	27.01	109.1	0.708	
500	4.02	34.09	27.08	103.2	0.814	
600	3.84	34.18	27.17	95.3	0.913	
700	3.65	34.25	27.25	88.8	1.005	
800	3.44	34.30	27.31	83.6	1.091	
1000	2.97	34.36	27.40	75.3	1.250	

MV PIONEER
STATION 103

49-00 N 130-40 W 29 AUG 1958 2133 GCT
WEATHER 02 CLOUDS 8 AMT 5 WIND 295 14 KTS SEA 4
SWELL 300 AMT 4 BAR 1010 MBS DRY 18.3 WET 16.7 BT 261

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	17.20	32.31	23.43	
10	17.70	32.29	23.29	
25	17.67	32.30	23.31	
50	12.24	32.44	24.58	
74	9.06	32.43	25.12	
98	8.04	32.64	25.44	
123	7.14	32.98	25.83	
147	6.94	33.30	26.11	
196	6.44	33.74	26.52	
294	5.72	33.88	26.72	
515	4.38	34.04	27.01	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	17.20	32.31	23.43	446.6	0.000	
10	17.70	32.29	23.29	459.6	0.045	
20	17.69	32.29	23.30	459.7	0.091	
30	17.63	32.34	23.35	455.0	0.137	
50	12.24	32.44	24.58	337.8	0.216	
75	9.01	32.44	25.14	285.0	0.294	
100	7.94	32.67	25.48	252.8	0.361	
150	6.91	33.33	26.14	190.5	0.472	
200	6.41	33.75	26.54	153.5	0.558	
250	6.03	33.82	26.64	144.1	0.632	
300	5.68	33.89	26.74	135.2	0.702	
400	5.03	33.98	26.89	121.8	0.831	
500	4.46	34.04	27.00	111.8	0.948	

MV PIONEER
STATION 104

48-52 N 129-10 W 30 AUG 1958 0625 GCT
WEATHER 03 CLOUDS 8 AMT 8 WIND 245 14 KTS SEA 3
SWELL 250 AMT 4 BAR 1012 MBS DRY 17.2 WET 16.7 BT 263

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	16.90	32.17	23.39	
9	17.48	32.17	23.25	
23	17.40	32.20	23.30	
46	11.91	32.20	24.46	
69	9.06	32.47	25.15	
93	7.88	32.64	25.46	
116	7.00	32.91	25.80	
139	6.82	33.22	26.06	
186	6.44	33.65	26.45	
279	5.85	33.89	26.72	
489	4.33	34.02	26.99	

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
	0	16.90	32.17	23.39	450.1	0.000	
	10	17.48	32.17	23.25	463.4	0.046	
	20	17.43	32.19	23.28	461.1	0.092	
	30	17.35	32.20	23.31	458.8	0.138	
	50	11.29	32.25	24.61	335.1	0.217	
	75	8.74	32.50	25.22	276.5	0.293	
	100	7.54	32.72	25.57	243.6	0.358	
	150	6.73	33.34	26.17	187.4	0.466	
	200	6.35	33.69	26.50	157.2	0.552	
	250	6.04	33.83	26.65	143.5	0.627	
	300	5.65	33.91	26.76	133.3	0.696	
	400	4.84	34.00	26.92	118.1	0.822	
*	500	4.28	34.02	27.00	111.2	0.937	

MV PIONEER
STATION 105

48-45 N 127-50 W 30 AUG 1958 1426 GCT
WEATHER 50 CLOUDS 8 AMT 9 WIND 200 14 KTS SEA 3
SWELL 250 AMT 5 BAR 1012 MBS DRY 15.8 WET 15.8 BT 265

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	15.90	32.10	23.56	
10	16.24	32.08	23.47	
25	12.94	32.19	24.25	
50	10.44	32.35	24.83	
74	8.72	32.57	25.28	
98	7.64	32.92	25.72	
123	7.18	33.37	26.13	
147	7.20	33.69	26.38	
196	6.82	33.91	26.61	
295	5.96	33.97	26.77	
518	4.80	34.11	27.01	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	15.90	32.10	23.56	433.5	0.000	
10	16.24	32.08	23.47	442.5	0.044	
20	13.89	32.15	24.03	389.4	0.086	
30	12.38	32.22	24.38	356.1	0.123	
50	10.44	32.35	24.83	313.5	0.190	
75	8.66	32.58	25.30	269.4	0.263	
100	7.59	32.96	25.75	226.4	0.325	
150	7.18	33.71	26.40	165.9	0.423	
200	6.78	33.91	26.61	146.4	0.501	
250	6.32	33.94	26.70	138.9	0.572	
300	5.92	33.97	26.77	132.2	0.640	
400	5.28	34.04	26.90	120.3	0.766	
500	4.85	34.10	27.00	111.8	0.882	

Summary of Observations at Bathythermograph Lowerings, MV PIONEER 1958 900' BT, Ser. No. 7851

Ser. No.	Time GCT	Date 1958	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed kts.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mbs	Wea-ther	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
1	1000	5/17	57°15'N	155°05'W	5.5	32	15	40.0	37.5	12	02	6	3	6	2	32	1	31.82
2	1310	5/17	57 00	155 39	4.9	32	15	39.5	37.5	13	03	6	9	6	2	32	1	31.92
3	1620	5/17	56 44	156 15	5.0	26	20	40.0	37.5	13	01	8	4	7	3	26	3	31.97
4	1720	5/18	54 33	160 00	4.4	19	24	38.0	34.5	14	02	6	9	6	3	19	1	32.04
5	Station 1																	
6	Station 2																	
7	1745	5/19	54 20	163 23	4.3	13	5	43.0	42.5	09	02	8	9	5	1	15	1	31.64
8	0050	5/21	54 27	165 48	4.4	12	25	42.0	40.5	05	02	8	9	6	4	12	4	32.48
9	Station 3																	
10	0120	5/28	52 56	179 29	4.0	08	5	44.0	42.5	85	41	7	9	4	2	08	1	33.29
11	Station 4																	
12	2300	5/28	53 06	179 30'E	3.6	14	5	45.0	43.5	87	02	6	9	7	2	14	1	33.21
13	Station 5																	
14	0330	5/29	53 03	178 40	3.5	09	14	41.5	40.5	88	02	6	9	7	2	09	1	33.22
15	Station 6																	
16	0030	30	53 15	177 26	3.5	11	10	40.0	39.5	89	02	6	9	7	3	11	2	33.12
17	Station 7																	
18	0935	5/30	53 43	175 55	2.9	12	5	40.0	38.5	90	02	6	9	6	1	12	1	33.22
19	Station 8																	
20	1920	5/30	54 16	174 44	3.0	36	12	40.0	39.5	92	02	6	9	7	2	36	1	33.22
21	Station 9																	
22	0045	5/31	54 47	174 13	3.1	36	15	40.5	38.5	92	60	6	9	7	2	36	2	33.19
23	Station 10																	
24	1050	5/31	54 41	173 42	3.2	25	5	42.0	40.5	92	01	6	8	7	1	36	1	33.15
25	Station 11																	
26	0250	6/1	54 15	173 16	3.5	25	5	41.5	39.5	94	02	6	9	7	1	25	1	33.13
27	Station 12																	
28	2330	6/1	53 44	172 47	3.9	26	15	44.0	41.0	01	02	8	7	7	3	26	4	33.04
29	Station 13																	
30	0510	6/2	53 14	172 14	3.8	26	10	40.5	38.5	01	02	8	9	7	2	26	3	33.06

Summary of Observations at Bathythermograph Lowerings, MV Pioneer 1958 900' BT, Ser. No. 7851

Ser. No.	Time GCT	Date 1958	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mbs	Weather	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
31	Station 14																	
32	2145	6/2	52°43'N	172°00'E	4.4	03	2	43.0	41.0	98	01	2	4	8	1	03	1	33.07
33	Station 15																	
34	0420	6/3	52 15	172 00	4.5	36	12	42.0	40.5	96	03	8	9	7	3	36	2	32.97
35	Station 16																	
36	0230	6/8	52 01	173 00	5.0	07	8	44.5	41.5	15	02	8	9	8	1	07	1	33.07
37	Station 17																	
38	2300	6/8	51 27	173 30	4.7	32	25	40.5	39.5	12	02	8	9	6	4	32	4	33.05
39	0200	6/9	51 24	173 58	4.3	32	25	42.0	40.5	10	02	8	9	6	4	32	4	33.08
40	0500	6/9	51 26	174 36	4.2	32	25	42.0	40.5	09	02	8	9	6	4	32	4	33.07
41	2100	6/10	51 35	178 08	4.7	32	8	44.0	42.0	05	02	8	9	8	1	32	1	32.99
42	Station 18																	
43	0235	6/11	51 07	178 50	5.3	32	15	46.0	43.0	04	02	8	9	8	2	32	2	32.71
44	Station 19																	
45	1120	6/16	52 02	176°34' W	4.3	14	9	41.5	41.5	09	51	7	6	4	1	14	1	33.13
46	2000	6/16	52 25	178 20	5.4	14	10	46.5	45.5	10	02	6	9	7	1	14	1	33.13
47	Station 20																	
48	0225	6/17	52 50	179 26	5.7	14	2	50.5	47.5	12	02	6	9	7	0	00	0	33.22
49	Station 21																	
50	2130	6/17	53 18	180 00	5.9	00	0	48.0	46.5	13	02	6	9	6	0	00	0	33.18
51	Station 22																	
52	0125	6/18	53 46	180 00	6.0	00	0	48.5	46.5	13	40	6	9	3	0	00	0	33.17
53	Station 23																	
54	2150	6/18	54 12	179 28	4.8	05	8	47.0	44.5	14	02	8	8	8	1	00	0	33.22
55	Station 24																	
56	0335	6/19	54 34	178 36	5.5	02	15	47.0	44.5	13	02	1	1	9	3	00	0	33.18
57	Station 25																	
58	0010	6/23	54 25	178 05	4.9	27	14	42.0	41.5	05	02	8	9	6	4	27	1	33.22
59	0210	6/23	54 16	177 46	4.8	27	12	43.0	42.0	05	02	8	9	6	4	27	1	33.18
60	Station 26																	

Summary of Observations at Bathythermograph Loweringe, MV PIONEER 1958 900' BT, Ser. No. 7851

Ser. No.	Time GCT	Date 1958	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed kts.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mbs	Wea-ther	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
61	0900	6/23	53°47'N	176°42'E	4.9	25	20	41.0	40.5	04	41	8	9	4	4	25	4	33.09
62	1200	6/23	53 33	176 13	5.2	23	24	42.0	42.0	03	61	7	9	4	4	23	4	33.07
63	1530	6/23	53 18	175 44	5.0	23	30	42.0	41.5	00	02	8	9	6	5	23	4	33.11
64	Station 27																	
65	0130	6/24	52 54	174 14	5.2	23	12	45.5	44.5	96	03	1	5	8	4	23	2	33.09
66	0330	6/24	52 51	173 46	5.1	23	16	43.5	42.5	95	02	8	9	6	4	23	2	33.10
67	0105	6/28	52 13	173 26	6.2	23	20	46.0	43.5	99	03	8	6	8	4	23	2	32.96
68	0405	6/28	51 54	173 45	6.3	23	24	45.5	43.5	99	02	8	9	7	4	23	4	33.01
69	Station 28																	
70	1200	6/28	51 27	174 33	5.9	28	20	43.0	42.0	00	20	8	9	5	3	23	4	33.03
71	1500	6/28	51 22	175 09	5.8	23	25	43.0	41.5	01	02	8	9	5	3	23	4	33.02
72	1800	6/28	51 19	175 45	5.0	23	18	42.5	41.5	01	11	8	9	5	3	23	4	33.15
73	Station 29																	
74	0200	6/29	51 19	177 06	5.8	23	16	46.0	43.5	02	02	8	9	7	3	23	4	32.96
75	0500	6/29	51 23	177 45	5.9	23	18	44.5	43.5	03	10	8	9	4	3	23	4	33.07
76	Station 30																	
77	1230	6/29	50 55	178 48	5.7	23	4	43.0	42.0	05	01	8	8	6	2	23	1	32.96
78	1530	6/29	50 37	179 11	6.0	25	8	43.0	42.0	05	02	8	9	7	3	25	1	32.78
79	1830	6/29	50 20	179 33	6.0	27	18	42.5	41.5	06	02	8	9	7	3	27	2	32.75
80	Station 31																	
81	2400	6/30	50 11	179°25'W	6.2	27	2	46.5	44.5	18	02	8	9	7	1	27	1	32.79
82	Station 32																	
83	0500	7/1	50 29	178 49	6.3	27	2	45.0	42.5	19	02	8	9	7	1	27	1	32.75
84	Station 33																	
85	1100	7/1	50 53	177 59	6.1	25	2	42.0	41.0	20	02	8	9	5	0	00	0	32.73
86	1400	7/1	51 08	177 28	6.0	25	4	42.0	41.0	20	02	8	9	5	0	00	0	32.73
87	1700	7/1	51 22	176 58	6.4	20	4	42.0	41.0	20	10	8	9	5	0	00	0	32.81
88	Station 34																	
89	0210	7/6	51 36	176 15	5.1	27	8	45.0	43.5	97	02	8	8	7	1	27	1	33.15
90	0350	7/6	51 26	176 04	5.0	27	16	45.0	43.5	97	03	8	9	7	3	27	2	32.67

Summary of Observations at Bathythermograph Loweringe, MV PIONEER 1958 900' BT, Ser. No. 7851

Ser. No.	Time GCT	Date 1958	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed kts.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mbs	Wea-ther	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
91	Station 35																	
92	2230	7/6	51°01'N	175°43'W	6.7	29	18	47.0	45.0	01	02	8	8	7	3	28	2	32.83
93	Station 36																	
94	0330	7/7	50 36	175 08	6.6	29	15	45.0	43.5	02	02	8	9	7	2	28	2	32.71
95	Station 37																	
96	2210	7/7	50 14	174 57	6.8	29	10	50.0	48.0	05	02	6	1	8	2	29	2	32.72
97	Station 38																	
98	0310	7/8	49 41	175 00	6.8	29	10	47.0	45.5	07	02	8	9	7	1	28	1	32.83
99	Station 39																	
100	2250	7/8	49 14	175 00	6.9	22	25	46.5	45.5	12	01	6	8	6	2	26	1	32.76
101	Station 40																	
102	0430	7/9	49 10	175 20	6.6	25	18	45.0	43.5	12	02	6	9	6	2	26	1	32.84
103	Station 41																	
104	1100	7/9	49 29	176 01	6.4	27	16	44.0	43.0	13	02	6	9	5	2	27	1	32.88
105	1400	7/9	49 38	176 24	6.5	27	14	44.0	43.0	15	02	6	9	5	1	27	1	32.88
106	Station 42																	
107	2030	7/9	49 57	177 03	6.5	27	10	45.0	44.5	16	01	6	9	3	1	27	1	32.86
108	Station 43																	
109	0100	7/10	50 16	177 30	6.9	21	8	47.0	45.5	15	02	6	9	7	1	23	1	32.81
110	Station 44																	
111	2210	7/10	50 37	178 05	6.7	09	28	45.5	45.0	00	51	6	9	5	4	09	4	32.77
112	2400	7/10	50 47	178 27	6.7	08	24	45.0	44.5	99	02	6	9	6	4	08	3	32.75
113	1900	7/11	50 53	179 24	6.6	03	22	44.0	43.5	02	02	6	9	6	3	03	3	32.53
114	2200	7/11	51 04	179°56'E	5.8	03	16	45.0	43.5	04	02	6	8	7	3	03	3	32.94
115	0250	7/12	51 14	179 17	6.6	02	14	50.0	46.5	06	01	6	7	7	1	02	1	32.84
116	Station 45																	
117	2240	7/12	50 42	178 15	6.9	24	14	46.0	44.0	12	02	6	9	6	1	24	1	32.75
118	Station 46																	
119	0320	7/13	50 25	177 43	6.7	24	22	46.0	44.5	11	02	6	9	6	4	24	3	32.76
120	Station 47																	

Summary of Observations at Bathythermograph Lowerings, MV PIONEER 1958 900' BT, Ser. No. 7851

Ser. No.	Time GCT	Date 1958	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed kts.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mbs	Weather	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
121	2220	7/13	50°07'N	177°08'E	6.9	23	16	45.5	44.0	11	02	6	9	6	2	24	1	32.75
122	Station 48																	
123	0240	7/14	49 50	176 34	6.9	18	6	47.5	46.0	10	02	6	9	6	1	18	1	32.91
124	Station 49																	
125	2220	7/14	49 28	175 57	7.1	16	10	46.5	45.5	10	02	6	9	6	2	16	1	32.80
126	Station 50																	
127	0330	7/15	49 10	175 18	7.3	15	8	47.0	46.0	10	02	6	9	6	2	15	1	32.86
128	Station 51																	
129	2200	7/15	49 10	174 59	7.2	15	11	46.5	46.0	09	61	6	9	6	2	15	1	32.80
130	Station 52																	
131	0300	7/16	49 44	174 55	7.2	15	12	46.0	46.0	07	51	6	9	4	3	15	2	32.81
132	Station 53																	
133	2250	7/16	50 16	174 56	7.2	11	10	48.0	46.5	04	02	6	9	7	2	11	1	32.75
134	Station 54																	
135	0350	7/17	50 46	174 58	7.2	11	8	47.5	46.0	04	02	6	9	7	2	11	1	32.79
136	Station 55																	
137	2200	7/17	51 14	174 58	7.1	09	2	50.0	47.0	02	02	8	8	7	0	09	1	32.86
138	Station 56																	
139	0320	7/18	51 48	175 00	7.4	36	4	48.5	46.0	02	02	8	8	7	1	09	1	32.88
140	Station 57																	
141	2220	7/18	52 15	175 00	6.9	36	4	50.0	46.5	06	02	1	6	7	1	36	1	33.03
142	Station 58																	
143	0310	7/19	52 49	175 00	8.0	07	2	50.0	46.5	07	03	8	7	7	0	07	1	33.09
144	Station 59																	
145	2320	7/19	53 17	175 00	7.8	10	3	50.0	46.0	10	02	8	9	7	1	10	1	33.08
146	Station 60																	
147	0330	7/20	53 22	175 24	8.0	21	6	49.5	46.0	10	02	8	9	7	1	09	1	33.08
148	Station 61																	
149	2140	7/20	53 07	176 07	8.2	23	2	47.5	45.5	09	61	8	9	6	1	23	1	33.04
150	Station 62																	

Summary of Observations at Bathythermograph Lowerings, MV PIONEER 1958 900' BT, Ser. No. 7851

Ser. No.	Time GCT	Date 1958	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed kts.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mbs	Weather	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
151	0110	7/21	53°04'N	176°43'E	7.8	30	8	47.5	45.0	10	02	8	9	6	1	25	1	33.03
152	Station 63																	
153	2210	7/21	53 03	177 08	8.0	30	9	52.0	48.5	16	02	3	4	8	2	30	1	33.10
154	Station 64																	
155	0200	7/22	53 00	177 44	8.3	24	10	56.0	50.5	15	01	6	2	8	2	00	0	33.10
156	Station 65																	
157	2050	7/23	53 10	178 40	6.9	06	18	46.5	45.0	03	02	6	9	6	4	06	4	33.14
158	2300	7/23	53 05	179 02	6.8	06	14	47.0	45.5	04	02	6	9	6	4	06	4	33.14
159	0105	7/24	53 05	179 23	7.0	06	15	47.0	45.5	05	02	6	9	6	4	06	4	33.09
160	Station 66																	
161	2220	7/24	53 07	179°41'W	7.0	11	12	47.0	44.5	07	02	2	2	7	2	11	1	33.04
162	Station 67																	
163	0310	7/25	53 01	178 52	6.3	11	8	46.5	44.5	05	02	6	9	7	2	11	1	33.13
164	Station 68																	
165	2230	7/25	52 59	177 57	6.8	14	15	48.0	45.5	03	02	6	9	7	2	14	1	33.13
166	Station 69																	
167	0310	7/26	53 00	177 15	7.3	14	15	48.0	45.5	03	02	6	9	7	3	14	1	33.09
168	Station 70																	
169	2220	7/26	53 03	176 31	7.7	11	6	50.0	47.5	01	02	8	6	7	2	11	1	33.07
170	Station 71																	
171	0300	7/27	52 59	175 40	8.0	04	2	49.5	47.5	00	02	6	9	7	1	00	0	33.13
172	Station 72																	
173	2250	7/27	52 50	175 27	8.4	36	2	50.5	49.0	00	44	6	9	3	1	36	1	33.12
174	Station 73																	
175	0330	7/28	52 30	176 02	7.9	36	2	49.0	47.5	01	44	6	9	3	1	36	1	33.12
176	Station 74																	
177	2200	7/28	52 05	176 23	5.3	32	12	46.5	45.5	07	02	6	9	6	3	32	2	33.16
178	Station 75																	
179	Station 76																	
180	2140	8/5	51 07	175 00	8.3	21	2	49.0	48.5	14	51	6	9	5	1	23	1	32.58

Summary of Observations at Bathythermograph Lowerings, MV PIONEER 1958 900' BT, Ser. No. 7851

Ser. No.	Time GCT	Date 1958	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed kts.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mbs	Weather	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
181	Station 77																	
182	0350	8/6	50°22'N	175°00'W	8.8	23	4	49.0	48.5	14	51	6	9	5	1	23	1	32.39
183	Station 78																	
184	2205	8/6	49 43	175 02	8.7	18	2	48.0	47.0	22	44	1	-	2	1	24	1	32.61
185	Station 79																	
186	0240	8/7	49 17	175 00	9.1	18	2	54.0	52.5	23	02	6	9	7	1	20	1	32.68
187	Station 80																	
188	2330	8/7	49 21	174 29	9.1	17	12	52.0	51.5	23	44	6	9	2	3	17	1	32.66
189	0245	8/8	49 40	174 03	9.1	22	14	52.0	51.5	22	47	-	-	2	4	20	2	32.57
190	Station 81																	
191	0915	8/8	50 11	173 15	8.9	23	14	51.0	50.5	21	47	-	-	2	4	22	2	32.64
192	1335	8/8	49 53	172 28	8.9	21	15	50.5	49.5	20	47	-	-	2	3	21	2	32.64
193	Station 82																	
194	2240	8/8	49 19	170 51	9.1	23	10	54.0	52.5	21	47	-	-	2	2	21	1	32.63
195	Station 83																	
196	2210	8/9	49 14	170 00	9.4	23	10	53.0	51.5	21	02	6	9	4	2	26	1	32.65
197	Station 84																	
198	0320	8/10	49 46	170 00	9.1	23	15	52.0	50.5	20	44	6	9	2	2	24	1	32.61
199	Station 85																	
200	2310	8/10	50 15	170 00	9.0	22	24	53.0	52.0	13	02	6	9	4	5	22	4	32.61
201	0120	8/11	50 30	170 00	9.0	22	24	53.0	52.0	12	02	6	9	5	5	22	4	32.61
202	0310	8/11	50 45	170 00	8.9	23	18	51.5	51.0	12	02	6	9	4	4	23	4	32.61
203	Station 86																	
204	0005	8/12	51 08	170 01	10.0	25	22	51.0	50.0	07	02	6	9	6	4	25	5	32.39
205	0215	8/12	51 23	170 07	9.5	26	25	50.0	48.5	07	02	6	9	6	4	24	5	32.22
206	0730	8/12	51 38	170 12	8.9	26	28	48.0	47.5	07	02	6	9	6	4	24	5	32.12
207	0730	8/12	51 53	170 10	8.9	26	24	49.0	48.0	09	02	6	9	5	4	24	5	32.11
208	Station 87																	
209	0725	8/13	52 15	170 00	7.4	27	30	46.0	45.5	12	02	6	9	5	4	27	3	32.22
210	1130	8/13	52 21	169 10	7.0	27	25	46.0	45.0	12	01	8	5	5	4	27	3	32.34

Summary of Observations at Bathythermograph Lowerings, MV PIONEER 1958 900' BT, Ser. No. 7851

Ser. No.	Time GCT	Date 1958	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed kts.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mbs	Weather	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
211	1930	8/13	52°32'N	167°34'W	9.9	27	20	49.5	47.5	11	02	8	7	6	4	27	3	32.20
212	2145	8/13	52 35	167 11	10.0	27	8	50.0	48.0	11	01	8	6	7	3	27	3	32.14
213	Station 88																	
214	0305	8/14	52 47	166 24	9.9	27	25	51.0	48.5	09	02	3	5	7	4	27	3	32.12
215	Station 89																	
216	0300	8/16	53 01	165 27	10.2	36	2	51.0	48.5	08	02	3	8	6	1	26	1	32.09
217	0510	8/16	53 17	165 15	9.3	00	0	50.0	48.0	07	02	6	8	6	0	26	1	31.95
218	Station 90																	
219	2325	8/18	54 13	160 30	10.9	17	10	51.0	50.0	05	02	8	9	6	2	17	1	32.24
220	Station 91																	
221	2115	8/19	53 58	160 00	11.2	14	8	52.0	50.5	07	02	8	9	6	2	14	1	32.27
222	Station 92																	
223	0045	8/20	53 38	160 00	11.1	14	3	52.0	50.5	07	02	8	9	6	1	14	1	32.48
224	Station 93																	
225	2130	8/20	53 10	160 00	10.5	04	18	51.5	51.5	99	63	7	9	5	3	04	2	32.58
226	Station 94																	
227	0330	8/21	52 30	160 00	9.9	35	13	51.5	51.5	92	50	7	9	5	3	02	1	32.62
228	Station 95																	
229	2200	8/21	52 05	159 20	9.6	23	25	53.0	50.5	03	02	8	3	7	4	22	3	32.65
230	0040	8/22	52 04	158 46	9.5	23	18	52.5	50.5	05	02	2	4	7	4	22	3	32.67
231	0320	8/22	52 00	158 15	9.4	20	18	53.0	51.5	06	01	1	1	7	4	22	3	32.66
232	Station 96																	
233	1030	8/22	51 52	157 00	9.3	14	5	50.0	49.0	06	02	8	6	5	2	14	1	32.66
234	1405	8/22	51 47	156 15	9.4	09	15	49.5	49.5	04	63	7	8	5	2	12	1	32.67
235	Station 97																	
236	0215	8/23	51 40	154 45	9.6	29	15	50.5	49.5	92	02	7	9	4	3	07	1	32.68
237	Station 98																	
238	2340	8/24	50 11	146 51	11.8	22	8	57.0	55.0	19	02	1	5	7	2	23	1	32.57
239	0220	8/25	49 54	146 35	11.7	24	12	55.0	54.5	19	03	4	5	7	2	24	1	32.65
240	Station 99																	

Summary of Observations at Bathythermograph Lowerings, MV PIONEER 1958 900' BT, Ser. No. 7851

Ser. No.	Time GCT	Date 1958	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed kts.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mbs	Weather	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
241	2230	8/25	50°02'N	145°25'W	12.1	26	6	58.0	57.0	19	02	8	9	7	2	25	1	32.61
242	0200	8/26	50 14	144 45	12.2	29	6	56.0	54.5	19	02	8	9	7	1	26	1	32.57
243	Station 100																	
244	1020	8/26	50 36	143 20	13.1	30	2	54.0	52.5	18	02	8	9	5	1	26	1	32.66
245	1400	8/26	50 48	142 40	13.2	32	5	54.0	52.5	18	02	8	9	6	1	27	1	32.63
246	Station 101																	
247	2150	8/26	51 07	141 25	13.4	00	0	60.0	56.0	18	02	8	8	7	0	00	0	32.57
248	0125	8/27	51 20	140 44	14.3	32	4	61.5	57.5	18	01	1	1	7	0	00	0	32.51
249	Station 102																	
250	2100	8/27	51 19	139 30	14.5	16	10	58.0	55.0	15	61	7	9	6	3	16	1	32.47
251	0030	8/28	50 58	138 50	14.5	16	12	55.5	54.5	13	61	7	9	6	3	16	1	32.38
252	0400	8/28	50 45	138 20	14.5	16	20	55.5	55.5	09	63	7	9	5	4	16	1	32.38
253	0815	8/28	50 25	137 45	14.8	16	18	59.5	59.5	06	63	7	9	5	4	16	2	32.39
254	1216	8/28	50 10	137 15	15.3	24	15	59.0	58.5	05	02	8	9	5	3	-	-	32.63
255	1545	8/28	49 53	136 45	15.4	26	20	59.5	58.0	04	02	8	9	6	4	-	-	32.53
256	1920	8/28	49 40	136 15	16.1	26	20	60.5	59.5	04	02	8	9	6	4	22	1	32.53
257	2245	8/28	49 23	135 45	16.2	26	25	61.0	59.5	05	02	8	7	6	5	26	3	32.49
258	0235	8/29	49 14	134 30	16.8	27	25	60.5	58.5	04	02	8	9	6	5	26	4	32.37
259	0610	8/29	49 10	133 42	16.6	27	30	59.0	57.5	04	02	8	6	5	5	26	4	32.23
260	1740	8/29	48 58	131 23	17.3	30	14	62.5	60.5	08	02	8	5	7	4	30	4	32.27
261	Station 103																	
262	0215	8/30	48 50	130 00	17.1	27	12	63.5	61.5	12	02	8	5	7	3	27	4	32.25
263	Station 104																	
264	1020	8/30	48 45	128 30	16.3	24	12	61.5	61.5	12	51	9	9	4	3	25	4	32.07
265	Station 105																	
266	1820	8/30	48 44	127 05	14.4	22	10	63.0	61.5	14	02	3	5	6	3	26	3	31.85
267	2245	8/30	48 40	126 20	15.0	23	4	67.0	64.5	14	03	8	8	6	2	27	1	31.89

Plankton Data, MV PIONEER, Numbers of Organisms per Cubic Meter of Water

Station	Hour (GCT)	Depth (m)	Volume (cc)	Wet wt (gm)	MEDUSAE	SIPHONOPHORE	CHAETOGNATHA	GASTROPODA	COPEPODA	EUPHAUSIACEA	AMPHIPODA	OSTRACODA	Crustacean larvae	TUNICATA	Miscellaneous	Total
4	06	150	65	6.1	0.3	1.1	6.0	2.2	112.0		0.5		27.2	0.8	9.2	159.3
		300	130	17.4	4.3	2.2	47.9		341.7	8.4	2.2	13.1	76.2		31.6	527.6
6	09	150	80	10.6	1.1	0.5	3.8	1.1	185.5	0.5	0.5	0.5	11.4		6.5	211.4
		300	115	19.1	2.2	1.1	17.4	1.1	443.0	4.4	3.3	26.1	14.1	1.1	22.8	536.6
8	17	150	110	12.2	6.5	3.3	14.1	1.1	427.5	1.1	2.2	6.5	134.9	8.7	17.4	623.3
		300	145	19.3	4.4	6.5	32.6		672.5	2.2	10.9	23.9	58.8	6.5	82.7	901.0
10	07	150	120	10.3			28.3		846.5	2.2	4.4	2.2	350.3		28.3	1262.2
		300	165	19.1	10.9	2.2	43.5	2.2	700.8	4.4	2.2	8.7	161.0		45.7	981.6
12	08	150	90	7.7	4.4		2.2	3.3	459.2		1.1		106.6	4.4	25.0	606.2
		300	80	11.2	4.4		10.3	1.6	133.1	0.5	0.5	10.3	35.4		6.5	202.6
14	10	150	115	14.1	8.7		7.6	2.2	316.6	1.1		1.1	15.2	6.5	31.6	390.6
		300	125	13.3	8.7		31.6	2.2	282.8		3.3	10.9	10.9	3.3	26.1	379.8
17	08	150	65	9.3	8.2	1.1	4.4		172.8	0.5	21.2	1.6	1.6		10.3	221.7
		300	100	16.8	7.1	1.7	18.5		125.6		3.8	5.4	0.5		10.9	298.1
21	08	150	55	7.2	1.1		1.6		82.3	0.8			2.2		3.5	91.5
		300	55	10.4	0.8	0.4	1.6	0.3	31.2		0.3	1.1	0.1		2.2	38.0
23	06	150	60	15.5	1.4	0.3	4.1		85.8		0.3				4.1	97.0
		240	65	16.7	1.0	0.2	1.2	0.8	58.3	0.2	0.7	0.5	1.3		2.0	66.2
25	08	150	25	3.0	0.5		0.4		20.9	0.1		0.1			1.5	23.5 *
		300	95	13.3	2.4	0.5	3.8		67.6		2.7	7.1			6.8	90.6

* Part of sample lost.

Plankton Data, MV PIONEER, Numbers of Organisms per Cubic Meter of Water

Station	Hour (GCT)	Depth (m)	Volume (cc)	Wet wt (gm)	MEDUSAE	SIPHONOPHORE	CHAETOGNATHA	GASTROPODA	COPEPODA	EUPHAUSIACEA	AMPHIPODA	OSTRACODA	Crustacean larvae	TUNICATA	Miscellaneous	Total
31	05	150	35	2.9	0.1	0.1	0.1	0.1	29.2	0.1	0.3			0.3	1.9	32.2
		300	70	10.9	1.1	0.5	12.0		33.9		1.6	1.1		0.8	5.9	56.9
35	07	150	100	7.8	6.5	2.2	22.8	10.9	771.3		4.4		6.5		38.1	862.7
		300	140	23.2	5.4	3.3	29.4	4.4	798.8		13.1	13.1	3.3	3.3	23.9	898.0
37	07	150	50	4.3		1.1	20.7	2.7	753.8	0.5	3.8		2.7	2.7	43.5	831.5
		300	80	10.8	2.7	0.8	10.3	4.4	219.3	0.5	17.7	6.3			15.2	277.2
39	06	150	70	7.9	3.3	1.1	14.7	11.4	281.3		8.7				8.7	329.2
		300	80	11.7	2.7	0.5	14.7	4.4	126.5		2.2	2.2			8.7	161.9
44	04	150	30	2.5	0.1		0.5	0.3	61.5		0.1			0.1	0.4	63.0
		300	60	9.5	0.7	0.3	3.1	0.4	49.9			0.1			1.5	56.0
45	06	150	50	6.2			4.9	3.3	198.6		1.6	0.5		1.1	5.4	215.4
		300	75	12.1			8.7	3.8	313.3		3.8	3.8			10.9	344.3
47	07	150	30	3.5	0.3	0.3	4.4	1.4	169.6	0.8	0.8	0.8			0.3	178.7
		320	80	2.9	2.8	1.0	6.4	0.5	73.6		0.3	6.4			7.9	98.9
49	06	150	60	3.3	0.1		0.3		47.5	0.1	1.1			0.1	1.9	51.1
		300	100	13.0	0.5	0.5	15.8	7.1	377.0		3.8	7.1		2.7	35.4	449.9
51	06	150	20	2.7	0.8		0.5	0.8	164.0		3.5				5.4	175.0
		300	80	11.0		1.4	20.1	0.3	94.6	0.3	0.8	3.3			15.5	136.3
53	06	150	60	7.4	0.3	0.3	6.8	0.5	164.3		7.6				8.2	188.0
		300	90	12.7	0.3	0.3	4.4		61.8		0.8	2.2			0.3	70.1

Plankton Data, MV PIONEER, Numbers of Organisms per Cubic Meter of Water

Station	Hour (GCT)	Depth (m)	Volume (cc)	Wet wt (gm)	MEDUSAE	SIPHONOPHORE	CHAETOGNATHA	GASTROPODA	COPEPODA	EUPHAUSIACEA	AMPHIPODA	OSTRACODA	Crustacean larvae	TUNICATA	Miscellaneous	Total
55	07	150	50	5.5	1.4	0.5	4.9	1.1	152.8	0.3	5.4	1.4	0.3		4.1	172.2
		300	100	12.8	3.3	2.2	12.0	2.2	311.2	1.1	4.4	3.8		1.1	19.0	360.3
57	06	150	80	9.6	1.1	1.1	5.4	2.2	287.8		2.7	1.1		0.5	9.2	311.1
		300	100	13.5	2.7	2.7	10.9	1.1	297.6		1.6	6.0	1.6	1.1	3.3	328.6
59	06	150	60	8.6	0.3	0.5	4.6	0.5	141.3	0.3	1.4	1.9		0.8	2.7	154.3
		300	80	9.8	0.5	0.3	4.1		76.2	0.3	0.7	2.0		0.1	2.0	86.2
61	07	150	65	6.4	0.5		1.9	0.3	126.0		0.5		0.3		5.7	135.2
		300	90	11.3	1.1	0.8	6.8	0.3	68.5	0.3	11.2	3.0			3.8	95.8
63	06	150	80	10.6	3.8	1.1	10.3		227.4	0.5	1.1				7.1	251.3
		300	70	14.9	3.0	0.8	10.1	0.5	145.3	0.3	0.8	1.6			3.3	165.7
65	05	150	55	6.1	0.8		5.4	4.1	153.0		3.0		2.4	0.3	1.6	170.6
		300	85	16.5	0.8	0.3	6.5	0.8	95.6		3.3	0.5		0.3	2.2	110.3
66	06	150	45	7.6	0.5	0.3	4.6	0.3	95.0		3.0				2.2	105.9
		300	85	17.5		0.5	9.5	0.8	67.8	0.3	3.0	1.6		0.3	8.7	92.5
68	06	150	25	4.2	0.3		2.2		82.4	0.8	1.4	0.3			2.2	89.6
		300	35	6.5	1.1	1.1	6.3	0.3	59.0	0.3	3.5	2.4			1.9	75.9
70	06	150	95	18.2	5.4	8.7	13.1		362.3	1.1	1.1	2.2			18.5	412.4
		300	100	18.8	1.1	2.7	7.6		133.1		0.5	1.1		0.5	10.3	156.9
72	06	150	25	6.7	0.5	1.6	3.3		107.2		27.2	0.5			6.0	146.3
		300	75	19.1	0.3	1.9	7.6		62.8		1.1	2.2	0.3	0.5	4.9	81.6

Plankton Data, MV PIONEER, Numbers of Organisms per Cubic Meter of Water

Station	Hour (GCT)	Depth (m)	Volume (cc)	Wet wt (gm)	MEDUSAE	SIPHONOPHORE	CHAETOGNATHA	GASTROPODA	COPEPODA	EUPHAUSIACEA	AMPHIPODA	OSTRACODA	Crustacean larvae	TUNICATA	Miscellaneous	Total
74	06	150	15	2.1	0.3	1.1	1.1	0.1	32.1		0.5	0.4	0.1	0.1	1.5	37.3
		300	65	4.2	0.8	1.4	7.3	0.8	72.6		0.8	3.0		0.3	5.7	92.7
76	10	150	20	4.2	0.5	0.3	1.6	16.3	60.6	0.5	3.5	0.5		1.1	4.4	89.3
		320	30	8.0	0.4	0.1	0.9	2.6	18.9	0.1	1.4	2.0		0.6	2.0	29.0
78	08	150	20	5.3	0.5	1.1	2.7	3.5	124.3	1.1	1.6			1.1	1.9	137.8
		300	40	9.7	1.6	0.5	6.5	1.6	64.0		1.1	1.4		0.8	4.1	81.6
80	07	150	30	5.8	2.4		11.4	0.3	138.7		0.3			0.8	6.0	159.9
		300	45	10.5	1.4	1.1	5.2	2.4	61.5		0.5	0.8		1.1	4.1	78.1
83	05	150	50	7.0	3.3		37.0	5.4	360.1	1.1	3.3	1.1		1.1	17.4	429.8
		300	95	13.5	6.5	1.1	16.3	2.2	335.6		2.7	4.9		2.7	13.6	385.6
85	08	150	15	4.9	2.2		3.8	1.6	276.7		23.9	2.2			7.6	318.0
		300	70	13.9	0.8		4.4	0.5	58.2	1.9	4.6	3.0		1.1		74.5
86	08	150	25	12.4	2.2		3.3	3.3	83.8	2.2	13.6					108.4
		300	40	11.3	0.8	0.8	3.8	0.5	35.1	0.5	3.5	0.5		0.3	1.9	47.7
91	05	150	40	2.5	7.6	9.8	39.2	30.5	156.7	1.1	14.1			35.9	14.1	309.0
		300	70	22.9	2.2	0.5	14.1	2.2	48.6	2.2	7.1	2.7	0.5	14.7	5.9	100.7
93	04	150	30	6.4	0.5	10.9		10.9	215.2		4.9	1.1	8.2		13.1	264.8
		300	45	10.4	1.1	0.5	22.3	3.8	223.4		6.5	3.8	3.8		18.2	283.4
99	07	170	25	4.6	7.7		7.7	3.8	402.2	1.0	1.9	1.0		1.9	10.6	437.8
102	07	150	60	18.7	15.2	4.4	2.2		126.3	2.2	1.1		6.5	40.3	7.6	205.8

Plankton Data, MV PIONEER, Numbers of Copepods per Cubic Meter of Water

Station	Depth (m)	Acartia	Calanus cristatus	Calanus finmarchicus	Calanus plumchrus	Candacia	Eucalanus bungii	Euchaeta japonica	Gaetanus	Heterorhabdus	Metridia lucens	Oithona	Pleuromamma	Pseudocalanus minutus	Miscellaneous
4	150		3.3	1.6	10.3	0.3	30.7					37.8		16.3	11.7
	300		9.8	1.1	22.8		57.7		1.1		8.7	128.4		55.5	56.6
6	150	1.1	4.4	1.6	20.7		41.3				5.4	85.4		6.0	19.6
	300	2.2	30.5	2.2	49.0	1.1	83.8	2.2	2.2		9.8	180.6	14.1	16.3	49.0
8	150		13.1	3.3	59.8		95.7			1.1	8.7	125.1		69.6	51.1
	300		15.2	17.4	97.9		76.2	10.9	4.4		10.9	256.8	6.5	45.7	130.6
10	150		15.2	10.9	34.8		130.6				6.5	443.9		111.0	93.6
	300		28.3	2.2	45.7	2.2	208.9	6.5				230.7		47.9	128.4
12	150		16.3	3.3	21.8	1.1	96.8				2.2	196.9		62.0	58.8
	300		2.7	1.6	17.4		33.2			0.5	2.7	46.2	0.5	10.9	17.4
14	150		25.0	2.2	64.2	1.1	77.2				45.7	54.4	1.1	16.3	29.4
	300		11.8	4.4	62.0	2.2	69.6		2.2		63.1	26.1	1.1	4.4	35.9
17	150		1.1	0.5	61.5		20.1	0.5			14.1	23.9		31.0	20.1
	300		2.2	0.5	43.5	0.5	18.5		2.2		18.0	14.1	5.4	8.2	12.5
21	150		4.4	2.2	4.1		18.8			0.3	2.2	39.2		7.6	3.5
	300		2.6	1.4	1.5		8.6				2.0	7.2		3.4	4.5
23	150		3.0	1.2	15.0		15.5				3.5	31.6		5.4	10.6
	240		1.0	1.7	14.3		11.4	0.2			3.0	18.3		7.2	1.2
25	150			0.8	1.1		1.8				0.7	13.5		1.6	1.4 *
	300		1.1	1.4	2.4		11.7	0.5	0.5		1.9	26.9	0.3	14.4	6.5

* Part of sample lost

Plankton Data, MV PIONEER, Numbers of Copepods per Cubic Meter of Water

Station	Depth (m)	Acartia	Calanus cristatus	Calanus finmarchicus	Calanus plumchrus	Candacia	Eucalanus bungii	Euchaeta japonica	Gaetanus	Heterorhabdus	Metridia lucens	Oithona	Pleuromamma	Pseudocalanus minutus	Miscellaneous
31	150			0.4	0.1		1.6				0.1	23.5		0.8	2.7
	300		0.8	0.3	1.9		15.5		0.3		1.4	7.1		1.4	5.2
35	150		25.0	12.0	81.6		108.8				59.8	205.6		199.1	79.4
	300		10.9	3.3	57.7		113.2			1.1	76.2	277.4	3.3	202.4	53.3
37	150		6.5	8.2	85.4	0.3	67.5				24.5	315.0		205.6	40.8
	300		3.5	3.5	8.2		28.6	0.3		0.3	38.4	59.0		57.9	19.6
39	150		0.5	2.7	102.8		18.5					89.8		58.8	8.2
	300		15.2	0.5	32.6		21.2			0.5	18.5	13.6	0.5	14.7	9.2
44	150				1.1		3.0					42.7		13.9	0.8
	300		2.3		0.7	0.1	11.0			0.1	14.0	11.3		9.2	1.2
45	150			2.2	60.4		62.6				0.5	38.6		25.6	8.7
	300		0.5	1.1	42.4	1.6	54.9			1.1	57.7	52.8	5.4	38.1	57.7
47	150		0.8		4.6	0.5	21.5				7.9	54.9		56.6	22.8
	320		1.0		6.4		24.3	0.3	0.3	0.5	6.7	8.4	0.8	18.2	6.7
49	150				6.3	0.1	5.8					13.9		17.3	4.1
	300		6.0		21.2	1.1	36.4		2.2	1.6	50.6	93.6	1.1	87.6	75.6
51	150				20.7		37.8				0.5	72.6		18.8	13.6
	300		4.1	0.3	5.7	0.3	35.1	0.3	0.5	1.9	5.4	7.3	1.9	18.5	13.3
53	150		6.8	2.4	24.8		49.0			0.8	3.0	11.7		38.6	27.2
	300		6.5	4.1	17.4		12.2		0.3	1.4	0.8	4.9	0.3	7.1	6.8

Plankton Data, MV PIONEER, Numbers of Copepods per Cubic Meter of Water

Station	Depth (m)	Acartia	Calanus cristatus	Calanus finmarchicus	Calanus plumchrus	Candacia	Eucalanus bungii	Euchaeta japonica	Gaetanus	Heterorhabdus	Metridia lucens	Othona	Pleuromamma	Pseudocalanus minutus	Miscellaneous
55	150	2.7	9.5	4.9	40.0	0.3	20.4		0.3	0.3	1.9	16.3	0.5	32.6	23.1
	300	1.6	12.0	4.9	54.4	1.6	51.7			1.6	65.3	29.9	3.8	35.4	49.0
57	150		9.2	2.7	52.8		62.6			0.5	4.4	62.6	0.5	51.7	40.8
	300		26.7	0.5	62.6		73.4			0.5	40.3	45.2		29.9	18.5
59	150	0.8	0.3	2.2	23.7		39.2			0.3	1.6	23.4		31.0	18.8
	300		0.8	0.3	15.4		15.0			0.1	2.7	15.6	0.1	20.1	6.1
61	150		0.3	1.4	19.9		46.8				5.7	25.0		18.2	18.7
	300		0.8	0.5	14.4		20.1			0.3	11.4	5.4	1.1	8.2	6.3
63	150		4.4	4.9	37.5		48.4	0.5			7.1	60.4		45.7	18.5
	300		3.5	1.6	19.0	0.5	44.9	0.8	0.3		9.2	28.3	0.5	28.0	8.7
65	150		4.4	4.4	15.0		33.5				8.4	47.6		34.5	5.2
	300		4.1	4.4	16.6		32.1	0.3			7.9	5.2	0.3	18.2	6.5
66	150		6.5	1.7	14.1		18.0				5.7	28.0		12.8	8.2
	300		4.9	0.3	2.4		17.7	0.3	0.5	0.3	8.7	12.2	0.3	12.0	8.2
68	150	0.3	0.5	0.5	4.1		33.2					23.4		14.1	6.3
	300			0.5	4.9		24.2	0.3	0.5	0.3	12.8	4.1	0.3	8.7	2.4
70	150		59.8	1.1	76.2		92.5	1.1		1.1	8.7	33.7		59.8	28.3
	300		12.5	5.4	27.7	0.5	50.0		3.8		6.5	3.3	1.1	9.2	13.1
72	150			2.2	9.2		41.9		0.5			18.5		18.0	16.9
	300		1.6	1.4	1.6		32.1	0.5	0.8		3.3	6.8	0.8	6.8	7.1

Plankton Data, MV PIONEER, Numbers of Copepods per Cubic Meter of Water

Station	Depth (m)	Acartia	Calanus cristatus	Calanus finmarchicus	Calanus plumchrus	Candacia	Eucalanus bungii	Euchaeta japonica	Gaetanus	Heterorhabdus	Metridia lucens	Oithona	Pleuromamma	Pseudocalanus minutus	Miscellaneous
74	150		0.3	0.8	2.0		5.0				3.5	7.1		8.0	5.4
	300		1.1		0.8		12.5	1.1	0.3		17.7	16.0	0.3	17.1	5.7
76	150	0.3	0.3	6.0	3.0		6.3	0.3	0.3	0.3	17.4	1.1	0.5	14.7	10.1
	320	0.1	0.5	1.5	0.6		2.9	0.1	0.1	0.3	4.0	2.0	0.5	4.5	1.8
78	150	0.8	4.6	2.2	4.4	0.3	18.8	0.5			46.2	18.2	0.3	20.4	7.6
	300		3.5	1.6	4.1		10.6	0.8	0.3	0.3	27.2	1.4	0.3	9.5	4.4
80	150		1.1	2.7	14.4	0.3	11.2				3.5	74.8		28.3	2.4
	300	0.3	1.6	1.6	7.1		8.7				6.3	19.3	0.3	11.7	4.6
83	150		5.4	9.8	53.3		20.7	4.4			5.4	124.0		101.2	35.9
	300		10.3	6.0	40.3		32.1	4.9	1.6	1.1	7.6	90.8		130.0	10.9
85	150		0.5	2.7	4.9		10.3			1.6	204.5	18.5	1.6	13.1	19.0
	300		2.7	0.8	1.4		17.7	3.0	0.5	1.1	25.3			0.3	5.4
86	150	1.6	0.5	0.5	8.7		4.4				52.8	2.7		4.4	8.2
	300		1.1	1.1	4.4		11.4		0.3	0.5	7.9	0.5		2.2	5.7
91	150	5.4	12.0		13.1		19.6	2.2		2.2	6.5	34.8		46.8	14.1
	300	3.8	3.8	3.8	1.6		6.0	1.1	1.6	1.6	4.9	7.6	0.5	3.8	8.7
93	150		0.5	0.5	4.4		5.4	1.6		0.5	9.2	159.9	2.2	19.0	12.0
	300		0.5	2.2	10.3		17.4	1.6		0.5	16.3	142.0	1.1	18.5	13.0
99	170			3.8	2.9		1.0	1.9			18.2	108.5		251.5	14.4
102	150		2.2	13.1	2.2			1.1	1.1		2.2	21.8		32.6	50.0

TABULATED DATA: MV ATTU

Station Data

Bathythermograph Observations

Plankton Data

MV ATTU
STATION 1

56-00 N 149-00 W 14 MAY 1958 1050 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 170 05 KTS SEA 1
SWELL - AMT BAR 1003 MBS DRY ---- WET ---- BT -

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	5.60	32.65	25.77	
9	5.63	32.65	25.76	.615
23	5.70	32.65	25.76	.613
46	5.64	32.66	25.77	.626
68	4.92	32.73	25.91	.567
91	4.68	32.93	26.09	
114	4.88	33.35	26.40	.352
137	4.87	33.53	26.55	.318
182	4.84	33.83	26.79	.213
228	4.54	33.89	26.87	.149
273	4.32	33.90	26.90	.097

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
	0	5.60	32.65	25.77	223.6	0.000	
	10	5.64	32.65	25.76	224.1	0.022	.615
	20	5.69	32.65	25.76	224.8	0.044	.615
	30	5.69	32.65	25.76	224.9	0.066	.612
	50	5.47	32.66	25.79	221.9	0.111	.617
	75	4.80	32.77	25.95	206.6	0.165	.522
	100	4.78	33.12	26.23	180.4	0.213	.397
	150	4.89	33.64	26.63	143.0	0.294	.283
	200	4.71	33.86	26.83	125.1	0.361	.187
	250	4.42	33.89	26.88	120.2	0.422	.119
*	300	4.25	33.91	26.92	117.3	0.481	.085

MV ATTU
STATION 2

53-06 N 149-50 W 14 MAY 1958 1512 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 170 05 KTS SEA 1
SWELL - AMT - BAR 1008 MBS DRY ---- WET ---- BT -

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	5.70	32.66	25.76	
10	5.66	32.66	25.77	.633
25	5.70	32.66	25.76	.626
50	5.58	32.66	25.78	.627
75	4.70	32.74	25.94	.604
100	4.63	32.91	26.08	.554
125	4.70	33.22	26.32	.474
150	4.86	33.60	26.60	.341
200	4.35	33.86	26.87	.150
250	4.11	33.94	26.95	.094
300	4.14	33.99	26.99	.072

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	5.70	32.66	25.76	224.0	0.000	
10	5.66	32.66	25.77	223.6	0.022	.633
20	5.70	32.66	25.76	224.2	0.044	.626
30	5.70	32.66	25.76	224.3	0.066	.626
50	5.58	32.66	25.78	223.1	0.111	.627
75	4.70	32.74	25.94	207.8	0.165	.604
100	4.63	32.91	26.08	194.5	0.215	.554
150	4.86	33.60	26.60	145.7	0.300	.341
200	4.35	33.86	26.87	121.2	0.367	.150
250	4.11	33.94	26.95	113.2	0.426	.094
300	4.14	33.99	26.99	110.2	0.482	.072

MV ATTU
STATION 3

56-14 N 150-45 W 14 MAY 1958 1920 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 170 05 KTS SEA 1
SWELL - AMT - BAR 1008 MBS DRY ---- WET ---- BT -

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	5.90	32.67	25.75	
10	5.69	32.67	25.77	.636
25	5.78	32.64	25.74	.631
50	5.68	32.64	25.75	.600
75	5.15	32.71	25.87	.563
100	4.88	32.88	26.03	.516
125	4.96	33.21	26.28	.428
150	5.05	33.63	26.61	.321
200	4.85	33.86	26.81	.204
250	4.66	33.93	26.89	.150
300	4.45	33.95	26.93	.123

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	5.90	32.67	25.75	225.5	0.000	
10	5.69	32.67	25.77	223.2	0.022	.636
20	5.76	32.64	25.74	226.4	0.044	.634
30	5.78	32.64	25.74	226.7	0.067	.625
50	5.68	32.64	25.75	225.8	0.112	.600
75	5.15	32.71	25.87	214.9	0.167	.563
100	4.88	32.88	26.03	199.4	0.219	.516
150	5.05	33.63	26.61	145.6	0.305	.321
200	4.85	33.86	26.81	126.7	0.373	.204
250	4.66	33.93	26.89	119.8	0.435	.150
300	4.45	33.95	26.93	116.5	0.494	.123

MV ATTU
STATION 4

56-20 N 151-40 W 14 MAY 1958 2320 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 170 05 KTS SEA 1
SWELL - AMT - BAR 1008 MBS DRY ---- WET ---- BT -

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.50	32.71	25.70	
10	6.11	32.66	25.71	.575
25	6.10	32.66	25.72	.624
50	5.78	32.66	25.75	.534
75	4.86	32.69	25.88	.616
100	4.76	32.93	26.09	.534
125	4.85	33.31	26.38	.401
150	4.70	33.56	26.59	.312
200	4.88	33.85	26.80	.194
250	4.78	33.90	26.85	.132
300	4.53	33.96	26.93	.111

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	6.50	32.71	25.70	229.6	0.000	
10	6.11	32.66	25.71	228.8	0.023	.575
20	6.12	32.66	25.71	229.0	0.046	.616
30	6.08	32.66	25.72	228.7	0.069	.592
50	5.78	32.66	25.75	225.4	0.114	.534
75	4.86	32.69	25.88	213.2	0.169	.616
100	4.76	32.93	26.09	194.4	0.220	.534
150	4.70	33.56	26.59	147.0	0.305	.312
200	4.88	33.85	26.80	127.7	0.374	.194
250	4.78	33.90	26.85	123.4	0.437	.132
300	4.53	33.96	26.93	116.6	0.497	.111

MV ATTU
STATION 5

53-3 N 165-00 W 18 MAY 1958 2233 GCT
WEATHER 00 CLOUDS - AMT 0 WIND 145 07 KTS SEA 5
SWELL 150 AMT 6 BAR 1009 MBS DRY 05.0 WET ---- BT 2

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	5.80	32.21	25.40	
9	5.43	32.20	25.43	.677
23	5.38	32.19	25.43	.636
47	5.33	32.20	25.44	.639
71	5.38	32.19	25.43	.650
95	5.28	32.30	25.53	.631
119	5.18	32.59	25.77	.566
142	5.18	32.98	26.08	.519
190	5.20	33.33	26.35	.448
237	5.28	33.70	26.64	.241
285	5.09	33.80	26.74	.197

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
	0	5.80	32.21	25.40	258.8	0.000	
	10	5.43	32.20	25.43	255.6	0.026	.673
	20	5.39	32.19	25.43	256.0	0.052	.642
	30	5.36	32.19	25.43	255.7	0.078	.636
	50	5.34	32.19	25.44	255.7	0.129	.642
	75	5.36	32.20	25.44	255.4	0.193	.650
	100	5.25	32.35	25.57	243.2	0.255	.616
	150	5.18	33.04	26.13	191.2	0.364	.517
	200	5.24	33.43	26.43	163.2	0.453	.390
	250	5.24	33.73	26.66	141.3	0.529	.226
*	300	5.00	33.82	26.76	132.4	0.597	.189

MV ATTU
STATION 6

53-00 N 165-00 W 19 MAY 1958 0253 GCT
WEATHER 00 CLOUDS - AMT 0 WIND 122 15 KTS SEA 4
SWELL 150 AMT 4 BAR 1005 MBS DRY 05.0 WET ---- BT 3

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	5.90	32.63	25.72	
9	5.90	32.63	25.72	.714
23	5.89	32.63	25.72	.642
47	5.79	32.63	25.73	.635
70	4.74	32.84	26.02	.561
94	4.97	33.18	26.26	.371
117	5.18	33.54	26.52	.317
140	5.24	33.71	26.65	.292
188	4.22	33.82	26.85	.133
235	4.08	33.94	26.96	.070
282	4.02	33.99	27.00	.049

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
	0	5.90	32.63	25.72	228.5	0.000	
	10	5.90	32.63	25.72	228.6	0.023	.707
	20	5.90	32.63	25.72	228.7	0.046	.653
	30	5.86	32.63	25.72	228.4	0.069	.640
	50	5.58	32.65	25.77	223.9	0.114	.631
	75	4.79	32.91	26.07	196.0	0.166	.510
	100	5.04	33.29	26.34	170.4	0.212	.354
	150	4.95	33.73	26.70	137.0	0.289	.251
	200	4.18	33.86	26.88	119.5	0.353	.113
	250	4.06	33.96	26.98	111.2	0.411	.060
*	300	4.00	34.00	27.01	108.0	0.466	.048

MV ATTU
STATION 7

51-53 N 179-50 W 27 MAY 1958 2237 GCT
WEATHER 00 CLOUDS - AMT 0 WIND 270 02 KTS SEA 3
SWELL 190 AMT 4 BAR 0988 MBS DRY 03.3 WET ---- BT 4

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	5.10	33.11	26.19	
10	4.90	33.18	26.27	.581
25	4.60	33.20	26.32	.569
50	4.52	33.23	26.35	.550
75	4.42	33.24	26.37	.534
100	3.68	33.22	26.43	.624
125		33.30		.541
150	3.17	33.30	26.54	.583
200	3.32	33.40	26.60	.510
250	4.04	33.67	26.75	.287
300	3.87	33.79	26.86	.230

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	5.10	33.11	26.19	183.6	0.000	
10	4.90	33.18	26.27	176.3	0.018	.581
20	4.68	33.19	26.30	173.3	0.035	.573
30	4.59	33.21	26.33	171.0	0.052	.565
50	4.52	33.23	26.35	168.9	0.086	.550
75	4.42	33.24	26.37	167.4	0.128	.534
100	3.68	33.22	26.43	161.8	0.169	.624
150	3.17	33.30	26.54	151.5	0.247	.583
200	3.32	33.40	26.60	145.6	0.321	.510
250	4.04	33.67	26.75	132.7	0.391	.287
300	3.87	33.79	26.86	122.4	0.455	.230

MV ATTU
STATION 8

53-17 N 170-35 W 16 JUN 1958 2254-2303 GCT
WEATHER 03 CLOUDS 6 AMT 6 WIND 145 05 KTS SEA 1
SWELL - AMT 0 BAR 1019 MBS DRY 07.2 WET ---- BT 5

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.20	32.93	25.78	
10	6.67	32.91	25.84	.679
25	5.68	32.96	26.00	.644
50	4.36	33.13	26.29	.592
75	3.82	33.20	26.40	.613
100	3.46	33.21	26.44	.613
125	3.41	33.28	26.50	.553
150	3.35	33.35	26.56	.505
200	3.71	33.50	26.65	.384
250	3.87	33.62	26.72	.291
300	3.83	33.74	26.82	.236

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	7.20	32.93	25.78	222.0	0.000	
10	6.67	32.91	25.84	216.9	0.022	.679
20	5.99	32.94	25.95	206.6	0.043	.655
30	5.35	33.00	26.07	194.9	0.063	.628
50	4.36	33.13	26.29	174.8	0.100	.592
75	3.82	33.20	26.40	164.5	0.142	.613
100	3.46	33.21	26.44	160.6	0.183	.613
150	3.35	33.35	26.56	149.3	0.260	.505
200	3.71	33.50	26.65	141.8	0.333	.384
250	3.87	33.62	26.72	134.7	0.402	.291
300	3.83	33.74	26.82	125.7	0.467	.236

MV ATTU
STATION 9

53-30 N 170-02 W 17 JUN 1958 0438-0630 GCT
WEATHER 01 CLOUDS 6 AMT 7 WIND 145 05 KTS SEA 1
SWELL 140 AMT 1 BAR 1016 MBS DRY 07.8 WET ---- BT 6

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.30	33.14	26.07	
10	6.66	33.12	26.01	.704
25	5.45	33.12	26.16	.612
50	4.84	33.18	26.27	.526
75	4.17	33.30	26.44	.490
100	4.02	33.31	26.46	.467
125	3.95	33.36	26.51	.460
150	3.96	33.43	26.57	.409
200	3.90	33.60	26.71	.312
250	3.84	33.68	26.78	.286
300	3.84	33.75	26.83	.208
400	3.60	33.95	27.01	.169
500	3.47	34.04	27.10	.135
700	3.19	34.18	27.24	.061
1050	2.58	34.41	27.47	.063

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	6.30	33.14	26.07	195.0	0.000	
10	6.66	33.12	26.01	201.1	0.020	.704
20	5.78	33.12	26.12	190.6	0.040	.639
30	5.33	33.13	26.18	184.9	0.059	.591
50	4.84	33.18	26.27	176.0	0.095	.526
75	4.17	33.30	26.44	160.4	0.137	.490
100	4.02	33.31	26.46	158.3	0.177	.467
150	3.96	33.43	26.57	149.1	0.254	.409
200	3.90	33.60	26.71	136.1	0.325	.312
250	3.84	33.68	26.78	129.9	0.392	.286
300	3.84	33.75	26.83	125.0	0.456	.208
400	3.60	33.95	27.01	108.4	0.573	.169
500	3.47	34.04	27.10	101.1	0.678	.135
600	3.34	34.11	27.17	95.2	0.776	.091
700	3.19	34.18	27.24	89.1	0.868	.061
800	3.03	34.25	27.31	82.9	0.954	.044
1000	2.68	34.38	27.44	70.7	1.108	.052

MV ATTU
STATION 10

53-48 N 168-57 W 18 JUN 1958 0023 GCT
WEATHER 03 CLOUDS 6 AMT 8 WIND 055 15 KTS SEA 3
SWELL 060 AMT 3 BAR 1016 MBS DRY 07.2 WET ---- BT 7

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.10	32.54	25.49	
10	6.39	32.52	25.57	.643
25	5.88	32.56	25.66	.585
50	5.65	32.64	25.75	.564
75	5.46	32.76	25.87	.527
100	5.16	33.07	26.15	.502
125	4.69	33.12	26.24	.480
150	4.11	33.20	26.37	.490
200	3.80	33.30	26.48	.477
250	3.65	33.40	26.57	.427
300	3.84	33.55	26.67	.331

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	7.10	32.54	25.49	249.9	0.000	
10	6.39	32.52	25.57	242.6	0.025	.643
20	6.02	32.55	25.64	236.1	0.049	.601
30	5.83	32.57	25.68	232.5	0.072	.582
50	5.65	32.64	25.75	225.4	0.118	.564
75	5.46	32.76	25.87	214.5	0.173	.527
100	5.16	33.07	26.15	188.2	0.223	.502
150	4.11	33.20	26.37	167.9	0.312	.490
200	3.80	33.30	26.48	157.7	0.393	.477
250	3.65	33.40	26.57	149.0	0.470	.427
300	3.84	33.55	26.67	140.0	0.542	.331

MV ATTU
STATION 11

53-59 N 167-32 W 18 JUN 1958 0848-1030 GCT
WEATHER 03 CLOUDS 3 AMT 8 WIND 055 15 KTS SEA 4
SWELL 060 AMT 4 BAR 1010 MBS DRY 06.7 WET ---- BT 8

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.00	32.67	25.61	
10	6.86	32.72	25.67	.665
24	5.88	32.80	25.85	.484
49	5.03	32.86	26.00	.480
73	5.08	32.93	26.05	.502
98	4.85	33.01	26.14	
123	4.78	33.08	26.20	.481
140	4.63	33.16	26.28	.415
191	4.28	33.31	26.44	.419
395	3.88	33.58	26.69	.286
494	3.78	33.85	26.92	.172
692	3.34	34.15	27.20	.069
1037	2.75	34.29	27.36	.055

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	7.00	32.67	25.61	238.9	0.000	
10	6.86	32.72	25.67	233.5	0.024	.665
20	6.12	32.78	25.81	220.1	0.047	.523
30	5.59	32.81	25.90	211.8	0.069	.481
50	5.04	32.86	26.00	202.2	0.110	.481
75	5.06	32.94	26.06	196.6	0.160	.506
100	4.85	33.01	26.14	189.3	0.208	.523
150	4.55	33.19	26.31	173.1	0.299	.417
200	4.26	33.31	26.44	161.5	0.383	.416
250	4.14	33.35	26.48	157.7	0.463	.395
300	4.03	33.41	26.54	152.5	0.541	.365
400	3.88	33.60	26.71	137.4	0.686	.279
500	3.77	33.86	26.93	117.6	0.814	.168
600	3.54	34.03	27.08	103.3	0.924	.108
700	3.32	34.16	27.21	92.0	1.022	.066
800	3.13	34.25	27.30	83.9	1.110	.042
1000	2.80	34.30	27.37	77.9	1.272	.046

MV ATTU
STATION 12

54-25 N 166-51 W 24 JUN 1958 0025-0037 GCT
WEATHER 02 CLOUDS 2 AMT 6 WIND 240 09 KTS SEA 4
SWELL 240 AMT 4 BAR 1014 MBS DRY 06.7 WET ---- BT 10

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.80	32.69	25.51	
10	6.78	32.75	25.70	.654
25	6.45	32.86	25.83	.622
50	4.55	33.07	26.22	.544
75	4.10	33.15	26.33	.525
100	4.06	33.23	26.40	.478
125	3.91	33.26	26.44	.488
150	3.70	33.31	26.50	.485
200	3.60	33.39	26.57	.447
250	3.80	33.43	26.58	.347
300	3.85	33.54	26.66	.298

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	7.80	32.69	25.51	247.9	0.000	
10	6.78	32.75	25.70	230.2	0.024	.654
20	6.63	32.82	25.77	223.3	0.047	.634
30	5.95	32.91	25.93	208.4	0.069	.602
50	4.55	33.07	26.22	181.3	0.108	.544
75	4.10	33.15	26.33	171.0	0.152	.525
100	4.06	33.23	26.40	164.7	0.194	.478
150	3.70	33.31	26.50	155.6	0.274	.485
200	3.60	33.39	26.57	149.0	0.350	.447
250	3.80	33.43	26.58	148.3	0.424	.347
300	3.85	33.54	26.66	140.9	0.496	.298

MV ATTU
STATION 13

54-59 N 167-22 W 24 JUN 1958 0623 GCT
WEATHER 01 CLOUDS 1 AMT 7 WIND 240 05 KTS SEA 2
SWELL 240 AMT 2 BAR 1014 MBS DRY 05.6 WET ---- BT 11

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.60	32.53	25.55	
10	6.50	32.91	25.86	.710
30	5.40	32.95	26.03	.562
50	4.95	32.95	26.08	.526
70	4.62	33.04	26.19	.532
90	4.45	33.08	26.24	.523
110	4.32	33.10	26.27	.522
130	4.26	33.12	26.29	.521
150	4.12	33.14	26.32	.518
170	4.02	33.25	26.42	.512
200	3.58	33.55	26.70	.516

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	6.60	32.53	25.55	244.3	0.000	
10	6.50	32.91	25.86	214.8	0.023	.710
20	5.87	32.94	25.96	205.2	0.044	.622
30	5.40	32.95	26.03	199.2	0.064	.562
50	4.95	32.95	26.08	194.5	0.103	.526
75	4.57	33.05	26.20	183.2	0.150	.529
100	4.38	33.09	26.25	178.5	0.195	.522
150	4.12	33.14	26.32	172.5	0.283	.518
200	3.58	33.55	26.70	136.8	0.360	.516

MV ATTU
STATION 14

55-04 N 169-24 W 25 JUN 1958 0558-0710 GCT
WEATHER 47 CLOUDS - AMT - WIND 170 30 KTS SEA 6
SWELL 170 AMT 7 BAR 1010 MBS DRY 06.4 WET ---- BT 13

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.60	33.01	25.93	
10	6.76	32.98	25.88	.631
25	6.78	32.97	25.87	.640
50	5.07	33.09	26.18	.588
75	4.02	33.17	26.35	.562
100	3.84	33.22	26.41	.577
125	3.57	33.26	26.47	.552
150	2.90	33.27	26.54	.613
200	3.78	33.47	26.61	.386
250	3.88	33.63	26.73	.291
300	3.85	33.76	26.84	.220

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	6.60	33.01	25.93	208.4	0.000	
10	6.76	32.98	25.88	212.8	0.021	.631
20	6.77	32.97	25.87	213.8	0.042	.640
30	6.39	33.00	25.95	207.0	0.063	.628
50	5.07	33.09	26.18	185.2	0.102	.588
75	4.02	33.17	26.35	168.7	0.146	.562
100	3.84	33.22	26.41	163.4	0.188	.577
150	2.90	33.27	26.54	151.4	0.267	.613
200	3.78	33.47	26.61	144.7	0.341	.386
250	3.88	33.63	26.73	134.1	0.411	.291
300	3.85	33.76	26.84	124.4	0.476	.220

MV ATTU
STATION 15

55-33 N 169-45 W 26 JUN 1958 0020 GCT
WEATHER 45 CLOUDS - AMT - WIND 240 08 KTS SEA 6
SWELL 210 AMT 4 BAR 1016 MBS DRY 07.2 WET ---- BT 14

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.60	32.82	25.78	
10	6.22	32.81	25.82	.622
25	6.20	32.80	25.81	.616
50	5.37	32.83	25.94	.587
75	4.32	32.98	26.17	.546
100	4.23	33.05	26.24	.526
125	4.10	33.09	26.28	.514
150	3.95	33.15	26.34	.521
200	3.58	33.23	26.44	.524
250	3.24	33.25	26.49	.562
300	3.45	33.40	26.59	.455

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	6.60	32.82	25.78	222.6	0.000	
10	6.22	32.81	25.82	218.9	0.022	.622
20	6.21	32.80	25.81	219.6	0.044	.620
30	6.05	32.81	25.84	217.1	0.066	.610
50	5.37	32.83	25.94	208.0	0.109	.587
75	4.32	32.98	26.17	185.9	0.158	.546
100	4.23	33.05	26.24	179.9	0.204	.526
150	3.95	33.15	26.34	170.0	0.291	.521
200	3.58	33.23	26.44	160.8	0.374	.524
250	3.24	33.25	26.49	156.4	0.453	.562
300	3.45	33.40	26.59	147.4	0.529	.455

MV ATTU
STATION 16

55-58 N 170-04 W 26 JUN 1958 0516 GCT
WEATHER 43 CLOUDS - AMT - WIND 210 08 KTS SEA 3
SWELL 210 AMT 3 BAR 1017 MBS DRY 06.1 WET ---- BT 15

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.80	32.79	25.73	
10	6.64	32.78	25.74	.650
30	6.58	32.77	25.74	.629
50	5.52	32.83	25.92	.600
70	4.48	32.90	26.09	.501
90	4.25	32.99	26.19	.526
110	3.97	33.09	26.29	.545
130	3.92	33.15	26.35	.535
150	3.74	33.16	26.37	.557
170	3.52	33.19	26.42	.546
200	3.50	33.25	26.47	.523

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	6.80	32.79	25.73	227.4	0.000	
10	6.64	32.78	25.74	226.2	0.023	.650
20	6.61	32.77	25.74	226.8	0.046	.640
30	6.58	32.77	25.74	226.5	0.069	.629
50	5.52	32.83	25.92	209.7	0.113	.600
75	4.43	32.92	26.11	191.5	0.163	.508
100	4.08	33.05	26.25	178.5	0.209	.539
150	3.74	33.16	26.37	167.3	0.295	.557
200	3.50	33.25	26.47	158.5	0.376	.523

MV ATTU
STATION 17

56-57 N 169-58 W 27 JUN 1958 0405 GCT
WEATHER 02 CLOUDS 6 AMT 8 WIND 150 03 KTS SEA 1
SWELL 150 AMT 1 BAR 1019 MBS DRY 07.2 WET ---- BT 17

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.80	32.22	25.28	
10	6.06	32.22	25.37	.863
20	5.90	32.20	25.38	.759
30	4.82	32.22	25.52	.757
40	4.75	32.27	25.56	.624
50	4.73	32.28	25.57	.605

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	6.80	32.22	25.28	270.0	0.000	
10	6.06	32.22	25.37	261.2	0.027	.863
20	5.90	32.20	25.38	260.9	0.053	.759
30	4.82	32.22	25.52	247.7	0.078	.757
50	4.73	32.28	25.57	242.5	0.127	.605

MV ATTU
STATION 18

57-31 N 170-00 W 28 JUN 1958 0029 GCT
WEATHER 47 CLOUDS - AMT - WIND 100 12 KTS SEA 3
SWELL 100 AMT 3 BAR 1010 MBS DRY 06.1 WET ---- BT 18

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.00	32.18	25.35	
10	5.66	32.13	25.35	.833
20	5.43	32.13	25.38	.788
30	3.62	32.19	25.61	.650
40	3.34	32.19	25.64	.646
50	3.30	32.20	25.65	.638
60	3.30	32.20	25.65	.652

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	6.00	32.18	25.35	263.4	0.000	
10	5.66	32.13	25.35	263.3	0.026	.833
20	5.43	32.13	25.38	260.9	0.052	.788
30	3.62	32.19	25.61	238.5	0.077	.650
50	3.30	32.20	25.65	235.0	0.124	.638

MV ATTU
STATION 19

57-59 N 169-59 W 28 JUN 1958 0501 GCT
WEATHER 46 CLOUDS - AMT - WIND 120 10 KTS SEA 4
SWELL 120 AMT 4 BAR 1008 MBS DRY 06.7 WET ---- BT 19

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.50	32.13	25.25	
10	6.16	32.14	25.30	.747
20	5.56	32.10	25.34	.692
30	4.60	32.13	25.47	.691
40	3.01	32.16	25.64	.630
50	2.90	32.16	25.65	.639
60	2.86	32.17	25.66	.577

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	6.50	32.13	25.25	273.0	0.000	
10	6.16	32.14	25.30	268.3	0.027	.747
20	5.56	32.10	25.34	264.6	0.054	.692
30	4.60	32.13	25.47	252.3	0.080	.691
50	2.90	32.16	25.65	234.8	0.129	.639

MV ATTU
STATION 20

57-40 N 170-41 W 29 JUN 1958 0009 GCT
WEATHER 47 CLOUDS - AMT - WIND --- 00 KTS SEA 2
SWELL 260 AMT 2 BAR 1010 MBS DRY 07.8 WET ---- BT 20

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.70	32.17	25.25	
10	6.02	32.16	25.33	.711
20	6.00	32.14	25.32	.690
30	4.84	32.18	25.48	.655
40	3.55	32.21	25.64	.613
50	3.52	32.21	25.64	.598
60	3.50	32.21	25.64	.558
70	3.50	32.21	25.64	.618

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	6.70	32.17	25.25	272.5	0.000	
10	6.02	32.16	25.33	265.2	0.027	.711
20	6.00	32.14	25.32	266.6	0.054	.690
30	4.84	32.18	25.48	251.0	0.080	.655
50	3.52	32.21	25.64	236.2	0.129	.598

MV ATTU
STATION 21

57-18 N 171-16 W 29 JUN 1958 0406 GCT
WEATHER 45 CLOUDS - AMT - WIND --- 00 KTS SEA 2
SWELL 270 AMT 2 BAR 1011 MBS DRY 07.8 WET ---- BT 21

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.10	32.29	25.30	
10	6.48	32.31	25.39	.764
20	6.48	32.31	25.39	.720
30	5.36	32.28	25.50	.646
40	4.88	32.30	25.57	.623
50	4.48	32.37	25.67	.601
60	3.98	32.49	25.82	.562
70	3.94	32.53	25.85	.541

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	7.10	32.29	25.30	268.5	0.000	
10	6.48	32.31	25.39	259.4	0.026	.764
20	6.48	32.31	25.39	259.6	0.052	.720
30	5.36	32.28	25.50	249.0	0.077	.646
50	4.48	32.37	25.67	233.2	0.125	.601

MV ATTU
STATION 22

56-55 N 171-52 W 29 JUN 1958 0808 GCT
WEATHER 45 CLOUDS - AMT - WIND 210 02 KTS SEA 2
SWELL 220 AMT 2 BAR 1010 MBS DRY 07.2 WET ---- BT 22

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.50	32.39	25.45	
10	6.44	32.39	25.46	.690
20	6.36	32.40	25.48	.637
30	5.83	32.51	25.63	.613
40	4.98	32.52	25.74	.609
50	4.10	32.59	25.88	.572
60	4.05	32.71	25.98	.496
70	3.91	32.76	26.04	.570

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	6.50	32.39	25.45	253.6	0.000	
10	6.44	32.39	25.46	253.0	0.025	.690
20	6.36	32.40	25.48	251.4	0.050	.637
30	5.83	32.51	25.63	237.0	0.074	.613
50	4.10	32.59	25.88	212.9	0.119	.572

MV ATTU
STATION 23

56-35 N 172-35 W 29 JUN 1958 1221 GCT
WEATHER 11 CLOUDS - AMT - WIND 150 04 KTS SEA 2
SWELL 180 AMT 2 BAR 1009 MBS DRY 06.8 WET ---- BT 23

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.90	32.51	25.50	
10	6.70	32.51	25.52	.724
20	6.48	32.53	25.57	.687
30	5.60	32.66	25.78	.625
40	5.32	32.75	25.88	.615
59	4.98	32.81	25.97	.593
79	4.44	32.87	26.07	.576
98	4.29	32.94	26.14	.567
118	4.05	32.99	26.21	.551
138	3.92			
157	3.83	33.13	26.34	.545

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	6.90	32.51	25.50	249.6	0.000	
10	6.70	32.51	25.52	247.2	0.025	.724
20	6.48	32.53	25.57	243.1	0.050	.687
30	5.60	32.66	25.78	223.1	0.073	.625
50	5.16	32.78	25.92	209.5	0.116	.603
75	4.52	32.86	26.06	197.0	0.167	.579
100	4.26	32.94	26.15	188.5	0.215	.565
150	3.86	33.10	26.31	172.9	0.305	.544

MV ATTU
STATION 24

56-15 N 173-14 W 29 JUN 1958 1639 GCT
WEATHER 11 CLOUDS - AMT - WIND 210 05 KTS SEA 2
SWELL 210 AMT 2 BAR 1008 MBS DRY 06.8 WET ---- BT 24

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.00	32.81	25.72	
10	6.78	32.84	25.77	.622
25	6.66	32.91	25.84	.518
50	5.30	33.05	26.12	.589
75	4.22	33.13	26.30	.524
100	3.74	33.18	26.39	.480
125	3.29	33.22	26.46	.547
150	3.24	33.26	26.50	.429
200	3.29	33.32	26.54	.454
250	3.82	33.58	26.70	.250
300	3.86	33.69	26.78	.126

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	7.00	32.81	25.72	228.4	0.000	
10	6.78	32.84	25.77	223.5	0.023	.622
20	6.76	32.89	25.81	219.7	0.045	.540
30	6.37	32.94	25.90	211.2	0.067	.543
50	5.30	33.05	26.12	190.8	0.107	.589
75	4.22	33.13	26.30	173.6	0.153	.524
100	3.74	33.18	26.39	165.4	0.195	.480
150	3.24	33.26	26.50	155.1	0.275	.429
200	3.29	33.32	26.54	151.3	0.352	.454
250	3.82	33.58	26.70	137.2	0.424	.250
300	3.86	33.69	26.78	129.8	0.491	.126

MV ATTU
STATION 25

55-51 N 173-48 W 29 JUN 1958 2056 GCT
WEATHER 11 CLOUDS - AMT - WIND 190 04 KTS SEA 3
SWELL 190 AMT 3 BAR 1008 MBS DRY 06.7 WET ---- BT 25

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.70	33.09	25.98	
10	6.48	33.06	25.98	.624
25	6.25	33.08	26.03	.631
50	4.36	33.13	26.29	.609
75	3.65	33.21	26.42	.563
100	3.25	33.21	26.46	.608
125	3.11	33.25	26.50	.581
150	2.94	33.27	26.53	.593
200	3.61	33.48	26.64	.389
250	3.85	33.68	26.77	.263
300	3.83	33.77	26.85	.210

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	6.70	33.09	25.98	203.7	0.000	
10	6.48	33.06	25.98	203.3	0.020	.624
20	6.40	33.07	26.00	201.7	0.040	.630
30	5.78	33.09	26.09	193.0	0.060	.629
50	4.36	33.13	26.29	174.8	0.097	.609
75	3.65	33.21	26.42	162.1	0.139	.563
100	3.25	33.21	26.46	158.7	0.179	.608
150	2.94	33.27	26.53	151.7	0.257	.593
200	3.61	33.48	26.64	142.3	0.330	.389
250	3.85	33.68	26.77	130.0	0.398	.263
300	3.83	33.77	26.85	123.4	0.461	.210

MV ATTU
STATION 26

55-27 N 174-23 W 30 JUN 1958 0123 GCT
WEATHER 11 CLOUDS - AMT - WIND --- 00 KTS SEA 3
SWELL 210 AMT 3 BAR 1007 MBS DRY 07.2 WET ---- BT 26

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.90	32.87	25.78	
10	6.43	32.86	25.83	.629
25	5.84	32.93	25.96	.622
50	4.00	33.08	26.28	.603
75	3.70	33.12	26.34	.582
100	3.37	33.20	26.44	.602
125	3.08	33.23	26.49	.594
150	2.97	33.28	26.54	.571
200	3.46	33.40	26.59	.452
250	3.82	33.59	26.71	.301
300	3.85	33.75	26.83	.206

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	10^5δ	Δ D	OXY
0	6.90	32.87	25.78	222.7	0.000	
10	6.43	32.86	25.83	217.7	0.022	.629
20	6.08	32.90	25.91	210.6	0.043	.625
30	5.35	32.97	26.05	197.1	0.063	.618
50	4.00	33.08	26.28	175.1	0.100	.603
75	3.70	33.12	26.34	169.4	0.143	.582
100	3.37	33.20	26.44	160.5	0.184	.602
150	2.97	33.28	26.54	151.2	0.262	.571
200	3.46	33.40	26.59	146.9	0.337	.452
250	3.82	33.59	26.71	136.5	0.408	.301
300	3.85	33.75	26.83	125.1	0.473	.206

MV ATTU
STATION 27

55-04 N 174-52 W 30 JUN 1958 0557-0740 GCT
WEATHER 50 CLOUDS - AMT - WIND 290 06 KTS SEA 2
SWELL 290 AMT 2 BAR 1007 MBS DRY 06.1 WET ---- BT 27

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.30	33.17	26.09	
10	5.97	33.14	26.11	.628
25	5.68	33.15	26.15	
50	3.96	33.19	26.37	.637
75	3.09	33.24	26.50	.608
100	2.95	33.28	26.54	.602
125	2.56	33.28	26.57	.597
150	2.90	33.35	26.60	.508
200	3.82	33.62	26.73	.291
250	3.86	33.75	26.83	.212
300	3.85	33.84	26.90	.161
400	3.65	34.00	27.05	.095
500	3.49	34.09	27.14	.067
700	3.22	34.23	27.27	.048
1050	2.71	34.38	27.44	.047

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	6.30	33.17	26.09	192.8	0.000	
10	5.97	33.14	26.11	191.2	0.019	.628
20	5.84	33.15	26.13	189.1	0.038	.637
30	5.27	33.16	26.21	182.0	0.057	.641
50	3.96	33.19	26.37	166.4	0.092	.637
75	3.09	33.24	26.50	154.9	0.132	.608
100	2.95	33.28	26.54	150.8	0.170	.602
150	2.90	33.35	26.60	145.3	0.244	.508
200	3.82	33.62	26.73	133.8	0.314	.291
250	3.86	33.75	26.83	124.9	0.379	.212
300	3.85	33.84	26.90	118.4	0.440	.161
400	3.65	34.00	27.05	105.2	0.552	.095
500	3.49	34.09	27.14	97.5	0.653	.067
600	3.36	34.16	27.20	91.7	0.748	.056
700	3.22	34.23	27.27	85.7	0.837	.048
800	3.08	34.29	27.33	80.4	0.920	.044
1000	2.79	34.37	27.42	72.6	1.073	.045

MV ATTU
STATION 28

53-58 N 175-00 W 01 JUL 1958 0518-0607 GCT
WEATHER 10 CLOUDS - AMT - WIND 320 15 KTS SEA 4
SWELL 320 AMT 5 BAR 1023 MBS DRY 06.1 WET ---- BT 29

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.70	33.19	26.06	
10	6.01	33.18	26.14	.620
25	6.01	33.18	26.14	.628
50	4.48	33.21	26.34	.634
75	3.22	33.25	26.49	.638
100	3.03	33.27	26.53	.643
125	2.86	33.26	26.53	.646
150	2.89	33.31	26.57	.580
200	3.55	33.65	26.78	.296
250	3.79	33.81	26.88	.175
300	3.75	33.90	26.96	.117
400	3.61	34.04	27.08	.083
500	3.45	34.12	27.16	.064
700	3.25	34.24	27.28	.046
1050	2.78	34.38	27.43	.042

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	6.70	33.19	26.06	196.2	0.000	
10	6.01	33.18	26.14	188.7	0.019	.620
20	6.01	33.18	26.14	188.8	0.038	.626
30	5.92	33.19	26.16	187.1	0.057	.629
50	4.48	33.21	26.34	170.0	0.093	.634
75	3.22	33.25	26.49	155.3	0.134	.638
100	3.03	33.27	26.53	152.2	0.172	.643
150	2.89	33.31	26.57	148.3	0.247	.580
200	3.55	33.65	26.78	129.0	0.316	.296
250	3.79	33.81	26.88	119.7	0.378	.175
300	3.75	33.90	26.96	112.9	0.436	.117
400	3.61	34.04	27.08	101.7	0.543	.083
500	3.45	34.12	27.16	94.9	0.641	.064
600	3.36	34.18	27.22	90.2	0.734	.054
700	3.25	34.24	27.28	85.3	0.822	.046
800	3.13	34.29	27.33	80.9	0.905	.041
1000	2.86	34.37	27.42	73.4	1.059	.040

MV ATTU
STATION 29

53-29 N 175-00 W 02 JUL 1958 0005 GCT
WEATHER 10 CLOUDS - AMT - WIND 180 02 KTS SEA 2
SWELL 190 AMT 3 BAR 1027 MBS DRY 07.2 WET ---- BT 30

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.90	33.19	26.03	
10	6.08	33.16	26.11	.628
25	6.05	33.18	26.13	.634
50	5.20	33.20	26.25	.639
75	3.45	33.22	26.45	.613
100	3.02	33.24	26.50	.631
125	2.81	33.24	26.52	.629
150	2.75	33.30	26.57	.580
200	3.54	33.52	26.68	.373
250	3.85	33.74	26.82	.225
300	3.86	33.84	26.90	.173

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	6.90	33.19	26.03	198.8	0.000	
10	6.08	33.16	26.11	191.0	0.019	.628
20	6.06	33.17	26.12	190.2	0.038	.632
30	5.95	33.18	26.14	188.2	0.057	.637
50	5.20	33.20	26.25	178.4	0.094	.639
75	3.45	33.22	26.45	159.6	0.136	.613
100	3.02	33.24	26.50	154.4	0.175	.631
150	2.75	33.30	26.57	147.8	0.251	.580
200	3.54	33.52	26.68	138.6	0.323	.373
250	3.85	33.74	26.82	125.5	0.389	.225
300	3.86	33.84	26.90	118.5	0.450	.173

MV ATTU
STATION 30

53-01 N 175-00 W 02 JUL 1958 0458-0616 GCT
WEATHER 01 CLOUDS 6 AMT 7 WIND 210 05 KTS SEA 2
SWELL 350 AMT 2 BAR 1025 MBS DRY 07.2 WET ---- BT 31

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.80	33.08	25.96	
10	6.28	33.06	26.01	.642
25	6.06	33.08	26.05	.635
50	4.22	33.13	26.30	.619
75	4.06	33.13	26.32	.606
100	3.95	33.17	26.36	.589
125	3.63	33.19	26.41	.598
150	3.55	33.24	26.45	.562
200	3.38	33.28	26.50	.545
250	3.25	33.33	26.55	.541
300	3.85	33.51	26.64	.379
400	4.02	33.73	26.80	.218
500	3.80	33.95	26.99	.133
700	3.45	34.14	27.18	.057
1050	2.98	34.33	27.37	.041

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	6.80	33.08	25.96	205.7	0.000	
10	6.28	33.06	26.01	200.9	0.020	.642
20	6.21	33.07	26.03	199.4	0.040	.638
30	5.56	33.09	26.12	190.5	0.059	.632
50	4.22	33.13	26.30	173.4	0.095	.619
75	4.06	33.13	26.32	172.1	0.138	.606
100	3.95	33.17	26.36	168.2	0.181	.589
150	3.55	33.24	26.45	159.4	0.263	.562
200	3.38	33.28	26.50	155.2	0.342	.545
250	3.25	33.33	26.55	150.5	0.418	.541
300	3.85	33.51	26.64	143.1	0.491	.379
400	4.02	33.73	26.80	129.2	0.627	.218
500	3.80	33.95	26.99	111.2	0.747	.133
600	3.62	34.05	27.09	102.6	0.854	.089
700	3.45	34.14	27.18	94.8	0.953	.057
800	3.30	34.21	27.25	88.7	1.045	.037
1000	3.04	34.31	27.35	79.8	1.213	.034

MV ATTU
STATION 31

52-14 N 176-47 W 10 JUL 1958 2351 GCT
WEATHER 11 CLOUDS 6 AMT 6 WIND 060 07 KTS SEA 2
SWELL 060 AMT 1 BAR 1008 MBS DRY 07.2 WET 06.7 BT 33

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.70	33.15	26.02	
10	7.06	33.12	25.95	
24	6.62	33.13	26.02	
49	5.36	33.19	26.22	
73	4.33	33.21	26.35	
98	3.42	33.22	26.45	
123	3.17	33.26	26.51	
147	3.08	33.30	26.55	
196	3.30	33.42	26.62	
245	3.71	33.64	26.76	
294	3.80	33.77	26.85	

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5 6$	Δ D	OXY
	0	6.70	33.15	26.02	199.2	0.000	
	10	7.06	33.12	25.95	206.2	0.020	
	20	6.77	33.13	26.00	201.9	0.040	
	30	6.30	33.15	26.08	194.7	0.060	
	50	5.31	33.19	26.23	180.4	0.098	
	75	4.23	33.21	26.36	167.7	0.142	
	100	3.39	33.22	26.45	159.2	0.183	
	150	3.09	33.30	26.54	150.8	0.260	
	200	3.35	33.44	26.63	142.9	0.333	
	250	3.72	33.65	26.76	131.0	0.401	
*	300	3.81	33.79	26.87	121.7	0.464	

MV ATTU
STATION 32

52-26 N 177-02 W 11 JUL 1958 0336-0446 GCT
WEATHER 01 CLOUDS 6 AMT 6 WIND 030 05 KTS SEA 3
SWELL 010 AMT 4 BAR 1006 MBS DRY 07.8 WET 07.5 BT 34

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.80	33.08	25.96	
10	7.00	33.09	25.94	.607
25	6.68	33.12	26.00	.610
50	5.18	33.17	26.23	.622
75	3.98	33.21	26.39	.618
100	3.52	33.21	26.43	.606
125	3.52	33.24	26.46	.550
150	3.15	33.27	26.51	.562
200	3.65	33.44	26.60	.444
250	3.79	33.62	26.73	.304
286	3.90	33.63	26.73	.255
390	3.75	33.90	26.96	.115
487	3.61	34.01	27.06	.085
682	3.40	34.15	27.19	.059
1024	2.87	34.34	27.39	.050

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	6.80	33.08	25.96	205.7	0.000	
10	7.00	33.09	25.94	207.6	0.021	.607
20	6.83	33.11	25.98	204.1	0.042	.609
30	6.36	33.13	26.05	196.9	0.062	.614
50	5.18	33.17	26.23	180.4	0.100	.622
75	3.98	33.21	26.39	165.3	0.143	.618
100	3.52	33.21	26.43	161.1	0.184	.606
150	3.15	33.27	26.51	153.5	0.263	.562
200	3.65	33.44	26.60	145.7	0.338	.444
250	3.79	33.62	26.73	133.9	0.408	.304
300	3.88	33.68	26.77	130.7	0.474	.230
400	3.73	33.91	26.97	112.7	0.596	.111
500	3.60	34.02	27.07	103.9	0.704	.083
600	3.50	34.09	27.13	98.4	0.805	.068
700	3.38	34.16	27.20	92.6	0.900	.057
800	3.24	34.22	27.26	87.3	0.990	.051
1000	2.91	34.33	27.38	76.9	1.154	.049

MV ATTU
STATION 33

52-21 N 178-00 W 11 JUL 1958 2340 GCT
WEATHER 02 CLOUDS 6 AMT 6 WIND 340 15 KTS SEA 3
SWELL 340 AMT 4 BAR 1008 MBS DRY 07.5 WET 06.9 BT 36

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.30	33.14	25.94	
9	6.89	33.12	25.98	.617
23	6.82	33.12	25.99	.613
47	4.49	33.13	26.27	.593
71	4.11	33.18	26.35	.572
94	3.74	33.22	26.42	.555
118	3.43	33.27	26.49	.538
141	3.35	33.30	26.52	.545
189	3.67	33.49	26.64	.385
236	3.86	33.68	26.77	.265
284	3.86	33.80	26.87	.190

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
	0	7.30	33.14	25.94	207.7	0.000	
	10	6.88	33.12	25.98	203.9	0.021	.617
	20	6.83	33.12	25.98	203.4	0.041	.614
	30	5.94	33.12	26.10	192.6	0.061	.607
	50	4.44	33.14	26.29	174.9	0.098	.590
	75	4.04	33.19	26.37	167.4	0.141	.569
	100	3.64	33.23	26.44	160.7	0.182	.548
	150	3.42	33.34	26.55	150.7	0.260	.512
	200	3.73	33.54	26.68	139.0	0.332	.353
	250	3.86	33.72	26.81	127.1	0.399	.238
*	300	3.85	33.83	26.89	119.2	0.461	.175

MV ATTU
STATION 34

52-04 N 178-38 W 12 JUL 1958 0429-0622 GCT
WEATHER 01 CLOUDS 8 AMT 7 WIND 030 12 KTS SEA 4
SWELL 020 AMT 4 BAR 1011 MBS DRY 07.7 WET 07.4 BT 38

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.20	33.13	25.94	
10	6.90	33.09	25.95	.608
25	6.82	33.10	25.97	.607
50	4.48	33.16	26.30	.623
75	3.77	33.21	26.41	.594
100	3.28	33.21	26.46	.614
125	3.10	33.22	26.48	.630
150	2.99	33.26	26.52	.594
200	3.32	33.40	26.60	.475
250	3.86	33.62	26.73	.285
300	3.90	33.77	26.84	.215
395	3.78	33.93	26.98	.120
494	3.56	34.05	27.10	.083
691	3.32	34.17	27.22	.051
1037	2.90	34.36	27.41	.060

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	7.20	33.13	25.94	207.1	0.000	
10	6.90	33.09	25.95	206.4	0.021	.608
20	6.87	33.09	25.96	206.1	0.042	.606
30	6.00	33.11	26.08	194.1	0.062	.614
50	4.48	33.16	26.30	173.8	0.099	.623
75	3.77	33.21	26.41	163.3	0.141	.594
100	3.28	33.21	26.46	158.9	0.181	.614
150	2.99	33.26	26.52	152.9	0.259	.594
200	3.32	33.40	26.60	145.6	0.334	.475
250	3.86	33.62	26.73	134.6	0.404	.285
300	3.90	33.77	26.84	124.2	0.469	.215
400	3.77	33.94	26.99	110.9	0.587	.118
500	3.55	34.05	27.10	101.1	0.693	.082
600	3.43	34.12	27.17	95.4	0.791	.062
700	3.31	34.18	27.22	90.4	0.884	.050
800	3.19	34.23	27.28	86.1	0.972	.045
1000	2.94	34.34	27.39	76.5	1.135	.055

MV ATTU
STATION 35

52-16 N 179-20 W 12 JUL 1958 2348 GCT
WEATHER 45 CLOUDS - AMT - WIND 270 05 KTS SEA 2
SWELL 270 AMT 2 BAR 1016 MBS DRY 07.2 WET 06.7 BT 40

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.50	33.16	26.06	
10	6.06	33.15	26.11	.585
25	5.36	33.24	26.26	.515
50	4.84	33.33	26.39	.444
75	4.39	33.34	26.45	.465
100	4.43	33.41	26.50	.404
125	4.48	33.47	26.54	.366
150	4.45	33.49	26.56	.355
200	4.26	33.56	26.64	.325
250	3.99	33.64	26.73	.291

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	6.50	33.16	26.06	196.0	0.000	
10	6.06	33.15	26.11	191.5	0.019	.585
20	5.56	33.21	26.22	181.4	0.038	.536
30	5.25	33.26	26.29	174.3	0.056	.493
50	4.84	33.33	26.39	164.8	0.090	.444
75	4.39	33.34	26.45	159.6	0.131	.465
100	4.43	33.41	26.50	154.9	0.170	.404
150	4.45	33.49	26.56	149.6	0.246	.355
200	4.26	33.56	26.64	142.8	0.319	.325
250	3.99	33.64	26.73	134.4	0.388	.291

MV ATTU
STATION 36

52-31 N 179-59 W 13 JUL 1958 0635 GCT
WEATHER 45 CLOUDS - AMT - WIND 250 07 KTS SEA 3
SWELL 260 AMT 3 BAR 1013 MBS DRY 06.9 WET 06.1 BT 42

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.40	33.17	26.08	
10	6.09	33.16	26.11	.615
25	5.67	33.21	26.20	.589
50	4.90	33.20	26.28	.585
75	4.74	33.28	26.36	.515
100	4.02	33.26	26.42	.536
125	4.18	33.31	26.45	.489
150	4.24	33.33	26.46	.477
200	4.18	33.45	26.56	.404
250	4.00	33.53	26.64	.350
300	3.92	33.62	26.72	.301

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	6.40	33.17	26.08	194.0	0.000	
10	6.09	33.16	26.11	191.2	0.019	.615
20	5.81	33.20	26.18	185.0	0.038	.596
30	5.47	33.20	26.22	181.2	0.056	.593
50	4.90	33.20	26.28	175.2	0.092	.585
75	4.74	33.28	26.36	167.7	0.135	.515
100	4.02	33.26	26.42	162.1	0.176	.536
150	4.24	33.33	26.46	159.4	0.256	.477
200	4.18	33.45	26.56	150.2	0.333	.404
250	4.00	33.53	26.64	142.8	0.406	.350
300	3.92	33.62	26.72	135.6	0.476	.301

MV ATTU
STATION 37

52-59 N 179-58 W 14 JUL 1958 0015 GCT
WEATHER 45 CLOUDS - AMT - WIND 270 15 KTS SEA 4
SWELL 270 AMT 4 BAR 1015 MBS DRY 06.8 WET 06.7 BT 44

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.40	33.16	26.07	
10	6.08	33.16	26.11	.605
25	5.64	33.21	26.21	.580
49	4.43	33.15	26.29	.595
74	3.54	33.17	26.40	.600
98	3.54	33.23	26.45	.559
122	3.88	33.32	26.49	.489
146	3.95	33.39	26.53	.446
195	3.75	33.49	26.63	.365
244	3.88	33.69	26.78	.245
292	3.83	33.79	26.86	.202

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
	0	6.40	33.16	26.07	194.8	0.000	
	10	6.08	33.16	26.11	191.0	0.019	.605
	20	5.81	33.20	26.18	185.0	0.038	.585
	30	5.36	33.19	26.22	180.7	0.056	.584
	50	4.38	33.15	26.30	173.5	0.091	.596
	75	3.53	33.17	26.40	164.0	0.133	.599
	100	3.58	33.24	26.45	159.4	0.173	.552
	150	3.92	33.39	26.54	151.7	0.251	.441
	200	3.77	33.51	26.65	141.6	0.324	.349
	250	3.87	33.71	26.80	128.0	0.391	.237
*	300	3.82	33.80	26.87	121.1	0.453	.199

MV ATTU
STATION 38

53-31 N 180-00 14 JUL 1958 0526-0611 GCT
WEATHER 45 CLOUDS - AMT - WIND 240 07 KTS SEA 3
SWELL 230 AMT 3 BAR 1014 MBS DRY 07.2 WET 07.0 BT 46

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.50	33.07	25.99	
10	6.78	33.04	25.93	.594
25	6.75	33.07	25.96	.616
50	3.65	33.12	26.35	.640
75	4.05	33.23	26.40	.522
100	4.03	33.36	26.50	.474
125	3.45	33.38	26.57	.461
150	3.78	33.53	26.66	.375
200	3.81	33.65	26.75	.307
341	3.71	34.00	27.04	.102
390	3.63	34.05	27.09	.079
439	3.59	34.11	27.14	.056
488	3.54	34.16	27.19	.054

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
	0	6.50	33.07	25.99	202.7	0.000	
	10	6.78	33.04	25.93	208.6	0.021	.594
	20	6.76	33.06	25.95	207.0	0.042	.609
	30	5.85	33.08	26.08	194.5	0.062	.622
	50	3.65	33.12	26.35	168.8	0.098	.640
	75	4.05	33.23	26.40	164.5	0.140	.522
	100	4.03	33.36	26.50	154.7	0.180	.474
	150	3.78	33.53	26.66	139.8	0.254	.375
	200	3.81	33.65	26.75	131.5	0.322	.307
	250	3.80	33.74	26.83	125.0	0.386	.221
	300	3.80	33.78	26.86	122.4	0.448	.185
	400	3.62	34.06	27.10	100.4	0.559	.073
*	500	3.53	34.17	27.20	92.0	0.655	.054

MV ATTU
STATION 39

53-41 N 179-00 E 15 JUL 1958 0015 GCT
WEATHER 45 CLOUDS - AMT - WIND 250 07 KTS SEA 3
SWELL 260 AMT 3 BAR 1015 MBS DRY 07.5 WET 07.1 BT 48

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.10	33.12	25.95	
10	7.04	33.11	25.95	.601
25	6.51	33.13	26.03	.613
50	3.62	33.13	26.36	.645
75	3.10	33.17	26.44	.622
100	2.80	33.22	26.51	.600
125	2.77	33.31	26.58	.595
150	3.34	33.48	26.66	.416
200	3.90	33.74	26.82	.210
250	3.78	33.85	26.92	.135
300	3.75	33.96	27.01	.085

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	7.10	33.12	25.95	206.6	0.000	
10	7.04	33.11	25.95	206.7	0.021	.601
20	6.79	33.12	25.99	202.9	0.041	.608
30	5.74	33.13	26.13	189.5	0.061	.624
50	3.62	33.13	26.36	167.7	0.097	.645
75	3.10	33.17	26.44	160.2	0.138	.622
100	2.80	33.22	26.51	154.0	0.177	.600
150	3.34	33.48	26.66	139.4	0.250	.416
200	3.90	33.74	26.82	125.6	0.316	.210
250	3.78	33.85	26.92	116.6	0.377	.135
300	3.75	33.96	27.01	108.4	0.433	.085

MV ATTU
STATION 40

54-00 N 178-00 E 15 JUL 1958 0557-0728 GCT
WEATHER C1 CLOUDS 6 AMT 5 WIND 250 02 KTS SEA 1
SWELL 250 AMT 1 BAR 1015 MBS DRY 06.6 WET 06.5 BT 50

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.30	33.20	25.98	
10	7.05	33.14	25.97	.620
25	6.78	33.17	26.03	.618
50	3.66	33.22	26.43	.590
75	3.45	33.28	26.50	.560
100	3.72	33.39	26.56	.480
125	3.72	33.43	26.59	.423
150	3.78	33.46	26.61	.385
200	3.85	33.51	26.64	.245
250	3.81	33.73	26.82	.134
300	3.76	33.90	26.96	.101
398	3.66	34.06	27.10	.065
497	3.50	34.17	27.20	.050
696	3.22	34.26	27.30	.044
1044	2.75	34.40	27.45	.048

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	7.30	33.20	25.98	203.2	0.000	
10	7.05	33.14	25.97	204.6	0.020	.620
20	7.00	33.16	25.99	202.6	0.040	.620
30	5.92	33.18	26.15	187.9	0.060	.613
50	3.66	33.22	26.43	161.3	0.095	.590
75	3.45	33.28	26.50	155.0	0.135	.560
100	3.72	33.39	26.56	149.4	0.173	.480
150	3.78	33.46	26.61	145.1	0.247	.385
200	3.85	33.51	26.64	142.4	0.319	.245
250	3.81	33.73	26.82	125.9	0.386	.134
300	3.76	33.90	26.96	113.0	0.446	.101
400	3.66	34.06	27.10	100.8	0.553	.065
500	3.50	34.17	27.20	91.7	0.649	.050
600	3.35	34.22	27.25	87.1	0.738	.046
700	3.21	34.26	27.30	83.4	0.823	.044
800	3.08	34.30	27.34	79.7	0.905	.043
1000	2.81	34.38	27.43	72.1	1.057	.046

MV ATTU
STATION 41

54-01 N 177-11 E 15 JUL 1958 2346 GCT
WEATHER 44 CLOUDS - AMT - WIND 210 01 KTS SEA 1
SWELL 210 AMT 1 BAR 1016 MBS DRY 08.3 WET 08.1 BT 51

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.80	33.12	25.85	
10	7.10	33.11	25.94	.615
25	6.42	33.15	26.06	.638
50	3.66	33.24	26.44	.639
75	3.15	33.25	26.50	.627
100	2.75	33.27	26.55	.620
125	2.87	33.37	26.62	.504
150	3.33	33.51	26.69	.380
200	3.89	33.79	26.86	.181
250	3.80	33.89	26.95	.125
300	3.78	33.96	27.00	.094

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	7.80	33.12	25.85	215.9	0.000	
10	7.10	33.11	25.94	207.4	0.021	.615
20	6.73	33.14	26.01	200.6	0.041	.632
30	5.69	33.17	26.17	186.0	0.060	.639
50	3.66	33.24	26.44	159.8	0.095	.639
75	3.15	33.25	26.50	154.6	0.134	.627
100	2.75	33.27	26.55	149.9	0.172	.620
150	3.33	33.51	26.69	137.1	0.244	.380
200	3.89	33.79	26.86	121.8	0.309	.181
250	3.80	33.89	26.95	113.8	0.368	.125
300	3.78	33.96	27.00	108.7	0.424	.094

MV ATTU
STATION 42

54-02 N 176-28 E 16 JUL 1958 0545-0616 GCT
WEATHER 44 CLOUDS - AMT - WIND 190 01 KTS SEA 1
SWELL 190 AMT 1 BAR 1015 MBS DRY 08.9 WET 08.4 BT 52

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.00	33.16	25.85	
10	7.39	33.14	25.92	.608
25	6.62	33.14	26.03	.613
50	3.70	33.20	26.41	.680
75	3.11	33.24	26.49	.654
100	2.89	33.26	26.53	.617
125	2.89	33.34	26.59	.534
150	3.34	33.52	26.70	.382
200	3.94	33.78	26.84	.186
250	3.82	33.89	26.94	.126
300	3.77	33.98	27.02	.087
395	3.71	34.08	27.11	.059
494	3.57	34.15	27.18	.051
692	3.26	34.26	27.29	.045
1040	2.79	34.39	27.44	.044

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	8.00	33.16	25.85	215.7	0.000	
10	7.39	33.14	25.92	209.0	0.021	.608
20	6.96	33.14	25.98	203.5	0.042	.608
30	5.85	33.15	26.13	189.3	0.062	.634
50	3.70	33.20	26.41	163.2	0.097	.680
75	3.11	33.24	26.49	155.0	0.137	.654
100	2.89	33.26	26.53	151.8	0.175	.617
150	3.34	33.52	26.70	136.4	0.247	.382
200	3.94	33.78	26.84	123.0	0.312	.186
250	3.82	33.89	26.94	114.0	0.371	.126
300	3.77	33.98	27.02	107.1	0.426	.087
400	3.70	34.08	27.11	99.7	0.529	.059
500	3.56	34.15	27.18	93.8	0.626	.051
600	3.40	34.21	27.24	88.4	0.717	.047
700	3.25	34.26	27.29	83.8	0.803	.045
800	3.10	34.31	27.35	79.1	0.884	.043
1000	2.84	34.38	27.43	72.4	1.036	.043

MV ATTU
STATION 43

54-03 N 175-45 E 16 JUL 1958 2341 GCT
WEATHER 44 CLOUDS - AMT - WIND 150 07 KTS SEA 2
SWELL 150 AMT 2 BAR 1012 MBS DRY 07.8 WET 07.7 BT 53

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.90	33.13	25.84	
10	7.22	33.13	25.94	.612
25	6.78	33.13	26.00	.625
50	3.93	33.18	26.37	.655
75	3.19	33.23	26.48	.651
100	2.89	33.25	26.52	.645
125	2.72	33.26	26.54	.632
150	2.51	33.30	26.59	.589
200	3.78	33.70	26.80	.249
250	3.78	33.85	26.92	.147
286	3.77	33.90	26.96	.122

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5\delta$	△ D	OXY
	0	7.90	33.13	25.84	216.5	0.000	
	10	7.22	33.13	25.94	207.5	0.021	.612
	20	7.03	33.13	25.97	205.2	0.042	.620
	30	6.04	33.14	26.10	192.3	0.062	.634
	50	3.93	33.18	26.37	166.9	0.098	.655
	75	3.19	33.23	26.48	156.5	0.138	.651
	100	2.89	33.25	26.52	152.5	0.177	.645
	150	2.51	33.30	26.59	145.8	0.252	.589
	200	3.78	33.70	26.80	127.4	0.320	.249
	250	3.78	33.85	26.92	116.6	0.381	.147
*	300	3.76	33.91	26.97	112.2	0.438	.118

MV ATTU
STATION 44

54-00 N 175-00 E 17 JUL 1958 0439-0531 GCT
WEATHER 02 CLOUDS 8 AMT 8 WIND 150 05 KTS SEA 2
SWELL 150 AMT 2 BAR 1010 MBS DRY 08.0 WET 07.7 BT 54

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.10	33.03	25.74	
10	7.99	33.02	25.74	.615
25	6.68	33.03	25.93	.640
50	4.46	33.12	26.27	.608
75	4.01	33.16	26.35	.592
100	3.87	33.22	26.41	.553
125	3.62	33.28	26.48	.517
150	3.72	33.37	26.54	.463
200	3.88	33.56	26.68	.339
250	4.05	33.75	26.81	.217
300	3.99	33.90	26.94	.136
399	3.80	34.03	27.06	.088
498	3.55	34.12	27.15	.060
697	3.38	34.24	27.27	.040
1045	2.83	34.39	27.44	.046

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	8.10	33.03	25.74	226.7	0.000	
10	7.99	33.02	25.74	226.1	0.023	.615
20	7.12	33.02	25.87	214.6	0.045	.635
30	6.09	33.05	26.02	199.6	0.066	.632
50	4.46	33.12	26.27	176.6	0.104	.608
75	4.01	33.16	26.35	169.3	0.147	.592
100	3.87	33.22	26.41	163.6	0.189	.553
150	3.72	33.37	26.54	151.3	0.268	.463
200	3.88	33.56	26.68	138.9	0.341	.339
250	4.05	33.75	26.81	126.8	0.407	.217
300	3.99	33.90	26.94	115.4	0.468	.136
400	3.80	34.03	27.06	104.5	0.578	.088
500	3.55	34.12	27.15	95.9	0.678	.060
600	3.48	34.18	27.21	91.4	0.772	.048
700	3.38	34.24	27.27	86.6	0.861	.040
800	3.25	34.29	27.32	82.2	0.945	.036
1000	2.92	34.37	27.41	74.0	1.101	.042

MV ATTU
STATION 45

54-30 N 175-00 E 18 JUL 1958 0029 GCT
WEATHER 45 CLOUDS - AMT - WIND 080 04 KTS SEA 2
SWELL 080 AMT 2 BAR 1008 MBS DRY 08.6 WET 08.2 BT 55

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.60	33.03	25.66	
10	8.18	32.99	25.69	.610
25	7.25	33.02	25.85	.626
50	4.62	33.14	26.27	.584
75	3.94	33.18	26.37	.577
100	3.80	33.24	26.43	.537
125	3.65	33.31	26.50	.490
150	3.57	33.39	26.57	.439
200	3.94	33.75	26.82	.225
250	3.89	33.88	26.93	.137
300	3.82	33.96	27.00	.105

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	8.60	33.03	25.66	233.9	0.000	
10	8.18	32.99	25.69	231.0	0.023	.610
20	7.61	33.01	25.79	221.8	0.046	.624
30	6.57	33.05	25.96	205.5	0.067	.615
50	4.62	33.14	26.27	176.7	0.105	.584
75	3.94	33.18	26.37	167.1	0.148	.577
100	3.80	33.24	26.43	161.5	0.189	.537
150	3.57	33.39	26.57	148.4	0.266	.439
200	3.94	33.75	26.82	125.3	0.334	.225
250	3.89	33.88	26.93	115.4	0.394	.137
300	3.82	33.96	27.00	109.1	0.450	.105

MV ATTU
STATION 46

55-00 N 175-00 E 18 JUL 1958 0525-0615 GCT
WEATHER 01 CLOUDS 3 AMT 5 WIND 080 03 KTS SEA 2
SWELL 080 AMT 2 BAR 1008 MBS DRY 08.6 WET 08.3 BT 56

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.30	33.16	25.81	
10	8.08	33.14	25.82	.493
25	6.46	33.16	26.06	.641
50	3.56	33.23	26.45	.681
75	2.77	33.23	26.52	.662
100	2.45	33.23	26.54	.645
125	2.15	33.24	26.57	.634
150	1.75	33.26	26.62	.610
200	3.82	33.78	26.86	.177
250	3.78	33.90	26.96	.114
300	3.72	33.97	27.02	.089
395	3.62	34.08	27.12	.060
494	3.50	34.16	27.19	.052
692	3.21	34.25	27.29	.044
1039	2.78	34.38	27.43	.046

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	8.30	33.16	25.81	219.9	0.000	
10	8.08	33.14	25.82	218.4	0.022	.493
20	7.01	33.15	25.98	203.4	0.043	.602
30	5.71	33.18	26.17	185.4	0.062	.654
50	3.56	33.23	26.45	159.6	0.097	.681
75	2.77	33.23	26.52	152.9	0.136	.662
100	2.45	33.23	26.54	150.4	0.174	.645
150	1.75	33.26	26.62	143.0	0.247	.610
200	3.82	33.78	26.86	121.8	0.313	.177
250	3.78	33.90	26.96	112.8	0.372	.114
300	3.72	33.97	27.02	107.3	0.427	.089
400	3.61	34.08	27.12	98.8	0.530	.060
500	3.49	34.16	27.19	92.3	0.626	.052
600	3.34	34.21	27.25	87.7	0.716	.047
700	3.20	34.25	27.29	84.0	0.802	.044
800	3.07	34.29	27.33	80.3	0.884	.042
1000	2.82	34.37	27.42	72.9	1.037	.045

MV ATTU
STATION 47

55-31 N 175- 00E 19 JUL 1958 0015 GCT
WEATHER 01 CLOUDS 3 AMT 4 WIND 060 01 KTS SEA 1
SWELL 060 AMT 1 BAR 1012 MBS DRY 09.4 WET 08.9 BT 57

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.50	33.19	25.80	
10	7.85	33.18	25.89	.615
25	6.17	33.19	26.12	.654
50	2.83	33.25	26.53	.657
75	2.70	33.26	26.55	.651
100	2.50	33.26	26.56	.640
125	2.51	33.33	26.62	.589
150	2.95	33.49	26.71	.409
200	3.88	33.83	26.89	.153
250	3.77	33.90	26.96	
292	3.69	33.97	27.02	.086

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
	0	8.50	33.19	25.80	220.5	0.000	
	10	7.85	33.18	25.89	212.3	0.022	.615
	20	6.76	33.18	26.04	198.0	0.043	.644
	30	5.25	33.21	26.25	178.0	0.062	.655
	50	2.83	33.25	26.53	151.8	0.095	.657
	75	2.70	33.26	26.55	150.1	0.133	.651
	100	2.50	33.26	26.56	148.6	0.170	.640
	150	2.95	33.49	26.71	135.2	0.241	.409
	200	3.88	33.83	26.89	118.7	0.304	.153
	250	3.77	33.90	26.96	112.7	0.362	.112
*	300	3.66	33.98	27.03	106.0	0.417	.082

MV ATTU
STATION 48

55-59 N 175-01 E 19 JUL 1958 0525-0618 GCT
WEATHER 01 CLOUDS 6 AMT 3 WIND --- 00 KTS SEA 1
SWELL 060 AMT 1 BAR 1012 MBS DRY 10.6 WET 09.4 BT 58

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.50	33.09	25.72	
10	7.97	33.08	25.79	.620
25	6.56	33.10	26.00	.649
50	3.02	33.16	26.44	.661
75	2.62	33.20	26.50	.615
100	1.94	33.24	26.59	.582
125	2.23	33.32	26.63	.530
149	3.36	33.64	26.79	.284
199	3.76	33.84	26.91	.141
248	3.69	33.91	26.97	.102
297	3.66	34.00	27.05	.073
395	3.60	34.07	27.11	.054
494	3.44	34.15	27.19	.049
692	3.15	34.26	27.30	.040

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
	0	8.50	33.09	25.72	228.0	0.000	
	10	7.97	33.08	25.79	221.4	0.022	.620
	20	7.09	33.09	25.93	209.0	0.044	.641
	30	5.60	33.11	26.13	189.4	0.064	.656
	50	3.02	33.16	26.44	160.2	0.099	.661
	75	2.62	33.20	26.50	154.0	0.138	.615
	100	1.94	33.24	26.59	145.8	0.175	.582
	150	3.37	33.65	26.80	126.9	0.243	.280
	200	3.76	33.84	26.91	116.7	0.304	.140
	250	3.69	33.91	26.97	111.2	0.361	.101
	300	3.66	34.00	27.05	104.5	0.415	.072
	400	3.59	34.07	27.11	99.3	0.517	.054
	500	3.44	34.16	27.20	91.8	0.613	.048
	600	3.33	34.24	27.27	85.4	0.702	.042
*	700	3.13	34.26	27.30	82.5	0.786	.040

MV ATTU
STATION 49

55-30 N 175-06 E 20 JUL 1958 0049 GCT
WEATHER 01 CLOUDS 6 AMT 3 WIND 250 02 KTS SEA 2
SWELL 250 AMT 2 BAR 1015 MBS DRY 09.3 WET 08.8 BT 59

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.40	33.19	25.82	
10	7.96	33.17	25.87	.621
25	6.50	33.20	26.09	.661
50	3.08	33.27	26.52	.666
75	2.68	33.29	26.57	.660
100	2.57	33.29	26.58	.650
125	2.08	33.31	26.64	.594
150	3.05	33.55	26.75	.392
200	3.88	33.84	26.90	.161
250	3.76	33.93	26.98	.118
300	3.72	33.99	27.03	.091

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	8.40	33.19	25.82	219.1	0.000	
10	7.96	33.17	25.87	214.5	0.022	.621
20	7.04	33.19	26.01	200.9	0.043	.651
30	5.57	33.22	26.22	180.8	0.062	.663
50	3.08	33.27	26.52	152.4	0.095	.666
75	2.68	33.29	26.57	147.7	0.133	.660
100	2.57	33.29	26.58	146.9	0.170	.650
150	3.05	33.55	26.75	131.6	0.240	.392
200	3.88	33.84	26.90	117.9	0.302	.161
250	3.76	33.93	26.98	110.4	0.359	.118
300	3.72	33.99	27.03	105.9	0.413	.091

MV ATTU
STATION 50

55-01 N 174-58 E 20 JUL 1958 0458-0543 GCT
WEATHER 02 CLOUDS 6 AMT 3 WIND 270 01 KTS SEA 2
SWELL 270 AMT 2 BAR 1015 MBS DRY 09.6 WET 08.9 BT 60

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.80	33.22	25.78	
10	7.86	33.17	25.88	.601
25	6.26	33.19	26.11	.650
50	3.42	33.26	26.48	.690
75	2.80	33.26	26.54	.665
100	2.43	33.26	26.57	.645
125	2.28	33.30	26.61	.625
150	2.27	33.35	26.65	.538
200	3.82	33.78	26.86	.190
250	3.75	33.89	26.95	.135
300	3.91	33.96	26.99	.100
398	3.62	34.11	27.14	.063
497	3.49	34.16	27.19	.054
696	3.22	34.27	27.30	.045
1044	2.74	34.43	27.48	.046

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	8.80	33.22	25.78	222.7	0.000	
10	7.86	33.17	25.88	213.1	0.022	.601
20	6.80	33.18	26.04	198.5	0.043	.636
30	5.51	33.21	26.22	180.9	0.062	.663
50	3.42	33.26	26.48	156.1	0.096	.690
75	2.80	33.26	26.54	150.9	0.134	.665
100	2.43	33.26	26.57	148.0	0.171	.645
150	2.27	33.35	26.65	140.1	0.243	.538
200	3.82	33.78	26.86	121.8	0.308	.190
250	3.75	33.89	26.95	113.3	0.367	.135
300	3.91	33.96	26.99	110.0	0.423	.100
400	3.62	34.11	27.14	96.6	0.526	.063
500	3.49	34.16	27.19	92.3	0.620	.054
600	3.35	34.22	27.25	87.1	0.710	.048
700	3.21	34.27	27.31	82.6	0.795	.045
800	3.08	34.32	27.36	78.2	0.875	.043
1000	2.80	34.41	27.45	69.7	1.023	.045

MV ATTU
STATION 51

54-30 N 174-58 E 21 JUL 1958 0008 GCT
WEATHER 02 CLOUDS 6 AMT 3 WIND 040 01 KTS SEA 2
SWELL 040 AMT 2 BAR 1014 MBS DRY 10.0 WET 10.0 BT 61

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.80	33.03	25.63	
10	7.95	33.01	25.74	.707
25	6.73	33.07	25.96	.619
50	4.62	33.13	26.26	.607
75	3.58	33.13	26.36	.601
100	3.75	33.25	26.44	.534
125	3.83	33.37	26.53	.464
150	3.66	33.46	26.62	.409
200	3.90	33.69	26.78	.242
250	3.95	33.86	26.91	.151
300	3.88	33.95	26.99	.110

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	8.80	33.03	25.63	236.8	0.000	
10	7.95	33.01	25.74	226.3	0.023	.707
20	7.14	33.05	25.89	212.6	0.045	.642
30	6.22	33.09	26.04	198.2	0.066	.616
50	4.62	33.13	26.26	177.5	0.104	.607
75	3.58	33.13	26.36	167.5	0.147	.601
100	3.75	33.25	26.44	160.2	0.188	.534
150	3.66	33.46	26.62	143.9	0.264	.409
200	3.90	33.69	26.78	129.4	0.332	.242
250	3.95	33.86	26.91	117.5	0.394	.151
300	3.88	33.95	26.99	110.5	0.451	.110

MV ATTU
STATION 52

54-00 N 174-58 E 21 JUL 1958 0522-0610 GCT
WEATHER 01 CLOUDS 6 AMT 4 WIND 330 03 KTS SEA 2
SWELL 330 AMT 2 BAR 1016 MBS DRY 10.0 WET 10.0 BT 62

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	9.10	33.03	25.58	
10	8.04	33.05	25.76	.607
25	7.00	33.07	25.92	.632
50	4.43	33.15	26.29	.610
75	4.44	33.27	26.39	.514
100	3.99	33.32	26.47	.511
125	4.01	33.37	26.51	.469
150	3.95	33.41	26.55	.443
199	3.96	33.57	26.68	.332
249	3.97	33.77	26.83	.211
298	3.84	33.86	26.92	.182
396	3.77	33.99	27.03	.105
495	3.74	34.10	27.12	.059
693	3.36	34.23	27.26	.050
1040	2.83	34.37	27.42	.048

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	9.10	33.03	25.58	241.2	0.000	
10	8.04	33.05	25.76	224.6	0.023	.607
20	7.39	33.06	25.86	215.1	0.045	.627
30	6.28	33.08	26.02	199.7	0.066	.634
50	4.43	33.15	26.29	174.0	0.103	.610
75	4.44	33.27	26.39	165.3	0.145	.514
100	3.99	33.32	26.47	157.3	0.185	.511
150	3.95	33.41	26.55	150.5	0.262	.443
200	3.96	33.58	26.68	138.2	0.334	.329
250	3.97	33.77	26.83	124.5	0.400	.210
300	3.84	33.86	26.92	116.8	0.460	.180
400	3.77	34.00	27.04	106.4	0.572	.103
500	3.73	34.10	27.12	99.3	0.675	.059
600	3.53	34.17	27.20	92.7	0.771	.054
700	3.35	34.23	27.26	87.1	0.861	.050
800	3.18	34.28	27.32	82.2	0.946	.048
1000	2.88	34.36	27.41	74.3	1.103	.047

MV ATTU
STATION 53

53-37 N 174-26 E 22 JUL 1958 0016 GCT
WEATHER 03 CLOUDS 6 AMT 7 WIND 240 07 KTS SEA 2
SWELL 240 AMT 3 BAR 1020 MBS DRY 09.6 WET 09.3 BT 63

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.40	33.05	25.71	
10	7.99	33.06	25.77	.622
25	6.93	33.06	25.92	.624
49	5.37	33.10	26.15	.570
74	4.72	33.20	26.30	.530
99	4.28	33.29	26.42	.495
124	4.11	33.35	26.49	.461
148	3.62	33.35	26.53	.469
198	4.02	33.59	26.69	.307
247	4.00	33.79	26.85	.182
285	3.80			.177

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
	0	8.40	33.05	25.71	229.5	0.000	
	10	7.99	33.06	25.77	223.1	0.023	.622
	20	7.28	33.06	25.88	213.7	0.045	.626
	30	6.53	33.06	25.98	204.2	0.066	.611
	50	5.34	33.10	26.15	187.5	0.105	.568
	75	4.70	33.20	26.31	173.3	0.150	.529
	100	4.28	33.29	26.42	162.4	0.192	.493
	150	3.64	33.36	26.54	151.3	0.270	.462
	200	4.02	33.60	26.69	137.3	0.342	.299
	250	3.98	33.80	26.86	122.3	0.407	.182
*	300	3.75	33.88	26.94	114.4	0.466	.175

MV ATTU
STATION 54

53-21 N 174-04 E 22 JUL 1958 0450-0532 GCT
WEATHER 03 CLOUDS 8 AMT 8 WIND 240 12 KTS SEA 3
SWELL 200 AMT 3 BAR 1018 MBS DRY 10.1 WET 09.7 BT 65

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.50	33.06	25.70	
10	7.20	33.04	25.87	.605
25	6.50	33.05	25.97	.626
50	4.90	33.14	26.24	.595
75	4.20	33.23	26.38	.532
100	3.80	33.30	26.48	.490
125	3.60	33.44	26.61	.410
150	3.50	33.52	26.68	.358
200	3.70	33.71	26.81	.243
250	3.70	33.85	26.92	.164
300	3.70	33.93	26.99	.129
395	3.67	34.05	27.09	.077
491	3.57	34.14	27.17	.051
685	3.27	34.25	27.28	.046

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	8.50	33.06	25.70	230.2	0.000	
10	7.20	33.04	25.87	214.0	0.022	.605
20	6.75	33.04	25.93	208.3	0.043	.622
30	6.11	33.07	26.04	198.4	0.063	.622
50	4.90	33.14	26.24	179.7	0.101	.595
75	4.20	33.23	26.38	165.9	0.144	.532
100	3.80	33.30	26.48	157.0	0.184	.490
150	3.50	33.52	26.68	137.9	0.258	.358
200	3.70	33.71	26.81	125.9	0.324	.243
250	3.70	33.85	26.92	115.8	0.384	.164
300	3.70	33.93	26.99	110.2	0.440	.129
400	3.67	34.06	27.09	100.9	0.546	.075
500	3.56	34.15	27.18	93.8	0.643	.049
600	3.42	34.21	27.24	88.6	0.734	.040

MV ATTU
STATION 55

52-21 N 175-00 E 29 JUL 1958 0113 GCT
WEATHER 01 CLOUDS 2 AMT 8 WIND 280 05 KTS SEA 3
SWELL 060 AMT 3 BAR 1021 MBS DRY 09.1 WET 08.9 BT 66

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.30	32.99	25.67	
10	7.94	32.97	25.71	.612
25	7.61	32.99	25.77	.606
50	5.64	33.08	26.10	.595
75	4.44	33.15	26.29	.574
100	4.08	33.19	26.36	.565
125	4.02	33.20	26.38	.553
150	3.96	33.21	26.39	.549
200	3.94	33.52	26.64	.358
237	3.90	33.70	26.79	.253
277	3.93	33.78	26.85	.209

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
	0	8.30	32.99	25.67	232.5	0.000	
	10	7.94	32.97	25.71	229.1	0.023	.612
	20	7.79	32.98	25.74	226.5	0.046	.608
	30	7.15	33.01	25.85	215.8	0.068	.605
	50	5.64	33.08	26.10	192.4	0.109	.595
	75	4.44	33.15	26.29	174.4	0.155	.574
	100	4.08	33.19	26.36	167.9	0.198	.565
	150	3.96	33.21	26.39	165.6	0.281	.549
	200	3.94	33.52	26.64	142.5	0.358	.358
	250	3.92	33.73	26.81	127.0	0.425	.236
*	300	3.90	33.80	26.86	121.9	0.487	.193

MV ATTU
STATION 56

52-15 N 177-01 E 29 JUL 1958 1312 GCT
WEATHER 01 CLOUDS 3 AMT 2 WIND 240 05 KTS SEA 3
SWELL 330 AMT 3 BAR 1021 MBS DRY 07.1 WET 06.8 BT 69

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	7.60	33.03	25.81	
10	7.59	32.97	25.76	.593
25	7.39	32.98	25.80	.600
50	5.21	33.14	26.20	.566
75	5.04	33.18	26.25	.538
100	4.44	33.29	26.40	.490
125	3.92	33.28	26.45	.515
150	3.74	33.35	26.52	.488
200	3.85	33.54	26.66	.344
250	3.82	33.71	26.80	.240
300	3.95	33.89	26.93	.127

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	7.60	33.03	25.81	219.9	0.000	
10	7.59	32.97	25.76	224.4	0.022	.593
20	7.55	32.97	25.77	224.0	0.044	.600
30	6.79	33.02	25.91	210.5	0.066	.593
50	5.21	33.14	26.20	183.0	0.105	.566
75	5.04	33.18	26.25	178.4	0.150	.538
100	4.44	33.29	26.40	164.0	0.193	.490
150	3.74	33.35	26.52	153.0	0.272	.488
200	3.85	33.54	26.66	140.1	0.345	.344
250	3.82	33.71	26.80	127.5	0.412	.240
300	3.95	33.89	26.93	115.7	0.473	.127

MV ATTU
STATION 57

52-31 N 174-58 W 05 AUG 1958 0024 GCT
WEATHER 44 CLOUDS 6 AMT 9 WIND 280 06 KTS SEA 3
SWELL 280 AMT 3 BAR 1012 MBS DRY 08.8 WET 08.8 BT 78

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.50	33.13	25.75	
10	7.97	33.17	25.86	.596
24	7.73	33.13	25.87	.605
49	5.74	33.18	26.17	.599
73	5.13	33.27	26.31	.488
98	4.81	33.30	26.37	.465
123	4.52	33.33	26.43	.464
147	4.21	33.34	26.47	.474
196	3.67	33.38	26.55	.490
246	3.54	33.41	26.59	.459
295	3.78	33.57	26.69	.348

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
	0	8.50	33.13	25.75	225.0	0.000	
	10	7.97	33.17	25.86	214.7	0.022	.596
	20	7.86	33.14	25.86	215.5	0.044	.603
	30	7.13	33.14	25.96	205.9	0.065	.614
	50	5.71	33.18	26.17	185.7	0.104	.593
	75	5.10	33.27	26.32	172.3	0.149	.485
	100	4.79	33.30	26.37	167.0	0.191	.464
	150	4.17	33.34	26.47	158.0	0.272	.476
	200	3.65	33.38	26.56	150.2	0.349	.491
	250	3.58	33.42	26.59	146.8	0.423	.454
*	300	3.77	33.59	26.71	136.3	0.494	.330

MV ATTU
STATION 58

53-00 N 174-59 W 05 AUG 1958 0542-0635 GCT
WEATHER 44 CLOUDS 6 AMT 9 WIND 280 03 KTS SEA 3
SWELL 280 AMT 3 BAR 1012 MBS DRY 09.2 WET 09.1 BT 80

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.80	33.19	25.75	
10	8.38	33.14	25.78	.600
25	8.29	33.14	25.79	.602
50	5.02	33.21	26.28	.645
75	3.50	33.23	26.45	.626
100	3.20	33.26	26.50	.593
125	3.22	33.31	26.54	.560
150	2.89	33.31	26.57	.569
200	3.79	33.61	26.72	.319
250	3.86	33.76	26.84	.207
300	3.77	33.83	26.90	.151
400	3.66	33.98	27.03	.106
500	3.50	34.11	27.15	.071
700	3.32	34.22	27.26	.056
1050	2.84	34.37	27.42	.046

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	8.80	33.19	25.75	224.9	0.000	
10	8.38	33.14	25.78	222.7	0.022	.600
20	8.33	33.14	25.79	222.1	0.044	.601
30	7.50	33.16	25.92	209.3	0.066	.616
50	5.02	33.21	26.28	175.7	0.105	.645
75	3.50	33.23	26.45	159.3	0.147	.626
100	3.20	33.26	26.50	154.4	0.186	.593
150	2.89	33.31	26.57	148.3	0.262	.569
200	3.79	33.61	26.72	134.3	0.333	.319
250	3.86	33.76	26.84	124.1	0.398	.207
300	3.77	33.83	26.90	118.3	0.459	.151
400	3.66	33.98	27.03	106.8	0.572	.106
500	3.50	34.11	27.15	96.2	0.673	.071
600	3.42	34.17	27.21	91.6	0.767	.063
700	3.32	34.22	27.26	87.5	0.857	.056
800	3.20	34.27	27.31	83.2	0.942	.051
1000	2.92	34.35	27.40	75.5	1.101	.046

MV ATTU
STATION 59

53-30 N 175-00 W 05 AUG 1958 2345 GCT
WEATHER 44 CLOUDS 6 AMT 9 WIND --- 00 KTS SEA 1
SWELL 240 AMT 2 BAR 1019 MBS DRY 08.3 WET 08.2 BT 82

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.60	33.13	25.74	
10	8.17	33.12	25.80	.595
25	8.12	33.12	25.80	.595
50	4.34	33.22	26.36	.634
75	3.36	33.24	26.47	.603
100	3.12	33.27	26.52	.595
125	2.89	33.29	26.55	.594
150	3.00	33.34	26.58	.534
200	3.86	33.65	26.75	.279
250	3.79	33.80	26.88	.196
300	3.74	33.89	26.95	.130

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	8.60	33.13	25.74	226.4	0.000	
10	8.17	33.12	25.80	221.2	0.022	.595
20	8.14	33.12	25.80	220.9	0.044	.593
30	7.14	33.15	25.97	205.3	0.065	.608
50	4.34	33.22	26.36	167.9	0.102	.634
75	3.36	33.24	26.47	157.2	0.143	.603
100	3.12	33.27	26.52	153.0	0.182	.595
150	3.00	33.34	26.58	147.0	0.257	.534
200	3.86	33.65	26.75	132.0	0.327	.279
250	3.79	33.80	26.88	120.4	0.390	.196
300	3.74	33.89	26.95	113.5	0.448	.130

MV ATTU
STATION 60

54-00 N 175-00 W 06 AUG 1958 0423-0510 GCT
WEATHER 01 CLOUDS 8 AMT 7 WIND 240 01 KTS SEA 1
SWELL 240 AMT 1 BAR 1020 MBS DRY 08.9 WET 08.3 BT 84

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	9.00	33.15	25.69	
10	8.28	33.13	25.79	.593
25	8.20	33.13	25.80	.595
50	4.28	33.21	26.36	.640
75	3.20	33.24	26.49	.617
100	3.00	33.29	26.54	.584
125	3.15	33.37	26.59	.542
150	3.31	33.46	26.65	.429
200	3.71	33.73	26.83	.218
250	3.75	33.84	26.91	.146
300	3.70	33.89	26.96	.117
400	3.58	34.04	27.09	.079
500	3.44	34.14	27.18	.056
700	3.25	34.22	27.26	.052
1012	2.89	34.35	27.40	.046

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	9.00	33.15	25.69	230.8	0.000	
10	8.28	33.13	25.79	222.0	0.023	.593
20	8.26	33.13	25.79	221.9	0.045	.595
30	8.05	33.15	25.84	217.6	0.067	.609
50	4.28	33.21	26.36	168.0	0.106	.640
75	3.20	33.24	26.49	155.8	0.146	.617
100	3.00	33.29	26.54	150.5	0.184	.584
150	3.31	33.46	26.65	140.7	0.257	.429
200	3.71	33.73	26.83	124.5	0.323	.218
250	3.75	33.84	26.91	117.0	0.383	.146
300	3.70	33.89	26.96	113.1	0.441	.117
400	3.58	34.04	27.09	101.4	0.548	.079
500	3.44	34.14	27.18	93.3	0.645	.056
600	3.35	34.18	27.22	90.1	0.737	.054
700	3.25	34.22	27.26	86.8	0.825	.052
800	3.14	34.26	27.30	83.3	0.910	.050
1000	2.91	34.34	27.39	76.1	1.069	.046

MV ATTU
STATION 61

54-30 N 175-00 W 06 AUG 1958 2340 GCT
WEATHER 03 CLOUDS 6 AMT 8 WIND 260 10 KTS SEA 4
SWELL 260 AMT 4 BAR 1027 MBS DRY 08.2 WET 08.1 BT 85

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.50	33.15	25.77	
10	8.45	33.14	25.77	.600
25	8.25	33.14	25.80	.594
50	3.98	33.22	26.40	.649
75	3.21	33.25	26.49	.621
100	3.02	33.27	26.53	.619
125	2.89	33.29	26.55	.601
150	3.08	33.40	26.62	.465
200	3.78	33.67	26.77	.271
250	3.85	33.82	26.89	.181
300	3.80	33.89	26.95	.144

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	8.50	33.15	25.77	223.5	0.000	
10	8.45	33.14	25.77	223.7	0.022	.600
20	8.40	33.14	25.78	223.1	0.044	.593
30	7.12	33.16	25.98	204.3	0.065	.612
50	3.98	33.22	26.40	164.3	0.102	.649
75	3.21	33.25	26.49	155.2	0.142	.621
100	3.02	33.27	26.53	152.1	0.180	.619
150	3.08	33.40	26.62	143.1	0.254	.465
200	3.78	33.67	26.77	129.7	0.322	.271
250	3.85	33.82	26.89	119.5	0.384	.181
300	3.80	33.89	26.95	114.1	0.442	.144

MV ATTU
STATION 62

55-01 N 175-00 W 07 AUG 1958 0431-0513 GCT
WEATHER 01 CLOUDS 6 AMT 8 WIND 240 20 KTS SEA 4
SWELL 270 AMT 4 BAR 1027 MBS DRY 08.1 WET 07.9 BT 86

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	9.00	33.15	25.69	
10	8.90	33.12	25.68	.584
25	8.56	33.12	25.74	.595
50	4.76	33.21	26.31	.642
75	3.21	33.23	26.48	.617
100	3.03	33.22	26.49	.613
125	2.92	33.28	26.54	.604
150	3.08	33.36	26.59	.525
200	3.65	33.58	26.71	.343
250	3.80	33.73	26.82	.322
300	3.78	33.86	26.92	.161
374	3.79	33.98	27.02	.108
468	3.59	34.08	27.12	.076
670	3.32	34.22	27.26	.052
1022	2.85	34.39	27.43	.050

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	9.00	33.15	25.69	230.8	0.000	
10	8.90	33.12	25.68	231.8	0.023	.584
20	8.83	33.12	25.70	230.9	0.046	.590
30	7.62	33.14	25.89	212.4	0.068	.610
50	4.76	33.21	26.31	172.9	0.107	.642
75	3.21	33.23	26.48	156.7	0.148	.617
100	3.03	33.22	26.49	156.0	0.187	.613
150	3.08	33.36	26.59	146.1	0.263	.525
200	3.65	33.58	26.71	135.2	0.333	.343
250	3.80	33.73	26.82	125.8	0.398	.322
300	3.78	33.86	26.92	116.2	0.458	.161
400	3.73	34.01	27.05	105.2	0.569	.098
500	3.55	34.10	27.14	97.4	0.670	.071
600	3.41	34.17	27.21	91.4	0.764	.058
700	3.28	34.24	27.28	85.6	0.853	.050
800	3.15	34.29	27.33	81.2	0.936	.045
1000	2.88	34.38	27.42	72.8	1.090	.049

MV ATTU
STATION 63

52-00 N 172-30 W 10 AUG 1958 0425 GCT
WEATHER 03 CLOUDS 6 AMT 8 WIND 210 12 KTS SEA 4
SWELL 210 AMT 4 BAR 1022 MBS DRY 09.6 WET 09.3 BT 88

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	6.60	33.10	26.00	
10	5.89	33.11	26.10	.479
20	5.72	33.20	26.19	.475
30	5.63	33.21	26.21	.465
40	5.36	33.25	26.27	.431
50	5.10	33.31	26.35	.382
70	4.93	33.38	26.42	.384
90	4.83	33.45	26.49	.337
120	4.76	33.58	26.60	.277
150	4.65	33.74	26.74	.214
175	3.95	33.78	26.84	.202

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	6.60	33.10	26.00	201.7	0.000	
10	5.89	33.11	26.10	192.5	0.020	.479
20	5.72	33.20	26.19	183.9	0.039	.475
30	5.63	33.21	26.21	182.3	0.057	.465
50	5.10	33.31	26.35	169.1	0.092	.382
75	4.90	33.40	26.44	160.4	0.133	.372
100	4.81	33.49	26.52	152.9	0.172	.317
150	4.65	33.74	26.74	133.0	0.243	.214

MV ATTU
STATION 64

52-36 N 165-22 W 16 AUG 1958 1431 GCT
WEATHER 02 CLOUDS 8 AMT 2 WIND --- 00 KTS SEA 1
SWELL 330 AMT 1 BAR 1009 MBS DRY 09.9 WET 09.7 BT 95

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	10.60	32.59	24.99	
10	10.68	32.54	24.94	.573
25	10.70	32.53	24.93	.564
50	5.21	32.84	25.96	.584
75	4.36	33.11	26.27	.480
100	4.17	33.49	26.59	.292
125	4.17	33.77	26.81	.161
150	4.17	33.90	26.92	.120
200	4.10	33.98	26.99	.050
250	3.84	34.04	27.06	.040
300	3.94	34.09	27.09	.035

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	10.60	32.59	24.99	297.4	0.000	
10	10.68	32.54	24.94	302.6	0.030	.573
20	10.70	32.53	24.93	303.9	0.060	.565
30	10.62	32.60	25.00	297.6	0.090	.578
50	5.21	32.84	25.96	205.5	0.140	.584
75	4.36	33.11	26.27	176.5	0.188	.480
100	4.17	33.49	26.59	146.3	0.228	.292
150	4.17	33.90	26.92	115.9	0.294	.120
200	4.10	33.98	26.99	109.7	0.350	.050
250	3.84	34.04	27.06	102.9	0.403	.040
300	3.94	34.09	27.09	100.6	0.454	.035

MV ATTU
STATION 65

52-00 N 165-00 W 17 AUG 1958 0337 0425 GCT
WEATHER 03 CLOUDS 8 AMT 3 WIND --- 00 KTS SEA 1
SWELL 330 AMT 1 BAR 1012 MBS DRY 13.4 WET 13.2 BT 96

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	13.10	32.68	24.60	
10	9.95	32.62	25.13	.579
25	9.87	32.61	25.13	.573
50	5.20	32.83	25.96	.615
75	4.46	32.97	26.15	.552
100	3.95	33.48	26.61	.300
125	4.01	33.78	26.84	.151
149	3.97	33.87	26.91	.107
198	3.92	33.95	26.98	.065
248	3.79	34.01	27.04	.037
297	3.84	34.06	27.08	.038
396	3.70	34.15	27.16	.041
495	3.52	34.22	27.24	.038
693	3.16	34.32	27.35	.040
1040	2.71	34.43	27.48	.055

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	13.10	32.68	24.60	334.9	0.000	
10	9.95	32.62	25.13	284.9	0.031	.579
20	9.90	32.61	25.13	285.1	0.059	.574
30	9.81	32.66	25.18	280.1	0.087	.590
50	5.20	32.83	25.96	206.2	0.136	.615
75	4.46	32.97	26.15	188.1	0.185	.552
100	3.95	33.48	26.61	144.9	0.227	.300
150	3.97	33.87	26.91	116.2	0.292	.106
200	3.91	33.95	26.98	110.0	0.349	.063
250	3.79	34.01	27.04	104.7	0.403	.037
300	3.84	34.06	27.08	101.8	0.455	.038
400	3.69	34.15	27.16	94.3	0.553	.041
500	3.51	34.22	27.24	88.0	0.644	.038
600	3.32	34.28	27.30	82.3	0.729	.038
700	3.15	34.32	27.35	78.3	0.809	.040
800	3.00	34.36	27.40	74.4	0.885	.043
1000	2.75	34.42	27.47	68.5	1.028	.053

MV ATTU
STATION 66

51-30 N 165-00 W 18 AUG 1958 0002 GCT
WEATHER 02 CLOUDS 8 AMT 9 WIND 240 01 KTS SEA 1
SWELL 250 AMT 1 BAR 1013 MBS DRY 10.0 WET 09.7 BT 98

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	10.10	32.70	25.16	
10	9.86	32.65	25.16	.564
25	9.75	32.64	25.17	.575
50	5.31	32.80	25.92	.610
75	4.03	33.21	26.38	.433
100	4.03	33.59	26.68	.242
125	4.10	33.82	26.86	.127
150	4.06	33.90	26.93	.080
200	3.95	33.97	26.99	.050
250	3.83	34.03	27.05	.045
300	3.77	34.07	27.09	.047

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	10.10	32.70	25.16	281.2	0.000	
10	9.86	32.65	25.16	281.3	0.028	.564
20	9.80	32.64	25.17	281.3	0.056	.570
30	9.72	32.65	25.19	279.5	0.084	.599
50	5.31	32.80	25.92	209.6	0.133	.610
75	4.03	33.21	26.38	165.8	0.180	.433
100	4.03	33.59	26.68	137.4	0.218	.242
150	4.06	33.90	26.93	114.8	0.281	.080
200	3.95	33.97	26.99	108.9	0.337	.050
250	3.83	34.03	27.05	103.6	0.390	.045
300	3.77	34.07	27.09	100.4	0.441	.047

MV ATTU
STATION 67

51-00 N 165-00 W 18 AUG 1958 0527-0602 GCT
WEATHER 02 CLOUDS 8 AMT 9 WIND 240 02 KTS SEA 1
SWELL 240 AMT 1 BAR 1011 MBS DRY 10.0 WET 09.7 BT 100

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	10.20	32.67	25.12	
10	9.78	32.65	25.18	.588
25	9.70	32.65	25.19	.574
50	4.79	32.83	26.00	.617
75	4.02	33.23	26.40	.428
100	3.95	33.74	26.81	.206
125	4.10	33.86	26.89	.113
150	4.10	33.89	26.92	.085
200	3.97	33.97	26.99	.053
250	3.83	34.03	27.05	.050
300	3.75	34.08	27.10	.041
392	3.66			.040
490	3.48			.035
685	3.11			.040
1028	2.62			.056

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	10.20	32.67	25.12	285.0	0.000	
10	9.78	32.65	25.18	280.0	0.028	.588
20	9.73	32.65	25.19	279.4	0.056	.575
30	9.65	32.67	25.21	276.9	0.084	.601
50	4.79	32.83	26.00	201.8	0.132	.617
75	4.02	33.23	26.40	164.2	0.178	.428
100	3.95	33.74	26.81	125.3	0.214	.206
150	4.10	33.89	26.92	116.0	0.274	.085
200	3.97	33.97	26.99	109.1	0.330	.053
250	3.83	34.03	27.05	103.6	0.383	.050
300	3.75	34.08	27.10	99.4	0.434	.041
400	3.65					.039
500	3.46					.035
600	3.26					.037
700	3.08					.041
800	2.92					.044
1000	2.65					.054

MV ATTU
STATION 68

50-30 N 165-00 W 19 AUG 1958 0025 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 230 05 KTS SEA 2
SWELL 230 AMT 2 BAR 1009 MBS DRY 09.7 WET 09.4 BT 102

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	9.90	32.69	25.19	
10	9.89	32.67	25.17	.580
25	9.72	32.66	25.19	.584
50	9.10	32.69	25.32	.589
75	4.72	32.86	26.03	.616
100	4.05	33.21	26.38	.459
125	3.84	33.73	26.82	.227
150	3.80	33.80	26.87	.187
200	3.74	33.89	26.95	.121
250	3.71	33.97	27.02	.097
300	3.72	34.05	27.08	.061

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
0	9.90	32.69	25.19	278.8	0.000	
10	9.89	32.67	25.17	280.3	0.028	.580
20	9.79	32.66	25.18	279.6	0.056	.583
30	9.71	32.67	25.20	277.8	0.084	.583
50	9.10	32.69	25.32	267.4	0.139	.589
75	4.72	32.86	26.03	199.0	0.197	.616
100	4.05	33.21	26.38	166.1	0.243	.459
150	3.80	33.80	26.87	119.7	0.314	.187
200	3.74	33.89	26.95	112.8	0.372	.121
250	3.71	33.97	27.02	106.9	0.427	.097
300	3.72	34.05	27.08	101.4	0.479	.061

MV ATTU
STATION 69

50-00 N 165-00 W 19 AUG 1958 0513-0600 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 250 03 KTS SEA 1
SWELL 250 AMT 2 BAR 1008 MBS DRY 09.6 WET 09.2 BT 104

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	9.80	32.75	25.25	
10	9.88	32.73	25.22	.570
25	9.60	32.70	25.25	.575
50	5.37	32.87	25.97	.635
75	4.46	32.90	26.09	.622
100	3.85	33.21	26.40	.477
125	3.78	33.71	26.81	.252
150	3.72	33.79	26.87	.208
200	3.67	33.87	26.94	.154
250	3.59	33.96	27.02	.116
300	3.65	34.02	27.06	.086
391	3.53	34.12	27.16	.077
489	3.44	34.21	27.24	.060
685	3.16	34.31	27.34	.050
1028	2.64	34.43	27.48	.057

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	9.80	32.75	25.25	272.7	0.000	
10	9.88	32.73	25.22	275.7	0.027	.570
20	9.70	32.70	25.23	275.3	0.055	.571
30	9.57	32.75	25.29	269.7	0.082	.593
50	5.37	32.87	25.97	205.0	0.129	.635
75	4.46	32.90	26.09	193.3	0.179	.622
100	3.85	33.21	26.40	164.2	0.224	.477
150	3.72	33.79	26.87	119.7	0.295	.208
200	3.67	33.87	26.94	113.6	0.353	.154
250	3.59	33.96	27.02	106.4	0.408	.116
300	3.65	34.02	27.06	102.9	0.460	.086
400	3.52	34.13	27.16	94.1	0.559	.075
500	3.42	34.22	27.25	87.1	0.650	.059
600	3.28	34.27	27.30	82.6	0.735	.053
700	3.14	34.32	27.35	78.2	0.815	.050
800	2.99	34.36	27.40	74.3	0.891	.049
1000	2.68	34.42	27.47	67.7	1.033	.055

MV ATTU
STATION 70

50-00 N 163-00 W 20 AUG 1958 0405 GCT
WEATHER 03 CLOUDS 6 AMT 9 WIND 100 02 KTS SEA 1
SWELL 100 AMT 1 BAR 1008 MBS DRY 09.1 WET 08.9 BT 106

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	9.80	32.79	25.28	
10	9.80	32.74	25.24	.579
25	8.58	32.78	25.47	.590
50	5.20	32.99	26.08	.631
75	4.67	32.99	26.14	.615
100	3.85	33.00	26.23	.468
125	3.70	33.74	26.84	.253
150	3.65	33.80	26.89	.230
200	3.58	33.88	26.96	.164
250	3.57	33.94	27.01	.132
300	3.50	34.00	27.06	.103

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	9.80	32.79	25.28	269.8	0.000	
10	9.80	32.74	25.24	273.7	0.027	.579
20	9.05	32.76	25.38	260.9	0.054	.585
30	7.68	32.84	25.65	235.6	0.079	.603
50	5.20	32.99	26.08	194.2	0.122	.631
75	4.67	32.99	26.14	188.7	0.170	.615
100	3.85	33.00	26.23	180.0	0.216	.468
150	3.65	33.80	26.89	118.3	0.291	.230
200	3.58	33.88	26.96	112.0	0.349	.164
250	3.57	33.94	27.01	107.7	0.404	.132
300	3.50	34.00	27.06	102.9	0.457	.103

MV ATTU
STATION 71

50-00 N 161-40 W 20 AUG 1958 1200 GCT
WEATHER 55 CLOUDS 6 AMT 9 WIND 010 20 KTS SEA 4
SWELL 020 AMT 4 BAR 1002 MBS DRY 08.9 WET 08.9 BT 108

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	8.50	32.73	25.44	
10	9.90	32.69	25.19	.574
24	9.70	32.70	25.23	.567
49	6.42	32.86	25.83	.624
73	4.76	32.91	26.07	.588
97	4.20	33.02	26.22	.578
121	3.80	33.66	26.76	.300
146	3.74	33.78	26.86	.217
195	3.66	33.87	26.94	.152
244	3.36	33.96	27.04	.101
291	3.35	34.04	27.11	.076

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
	0	8.50	32.73	25.44	254.7	0.000	
	10	9.90	32.69	25.19	279.0	0.027	.574
	20	9.78	32.69	25.21	277.3	0.055	.566
	30	9.62	32.75	25.28	270.5	0.082	.589
	50	6.33	32.86	25.84	217.0	0.131	.622
	75	4.71	32.90	26.07	195.9	0.183	.597
	100	4.13	33.13	26.31	172.9	0.229	.533
	150	3.74	33.79	26.87	119.9	0.302	.211
	200	3.62	33.88	26.96	112.4	0.360	.146
	250	3.36	33.97	27.05	103.5	0.414	.096
*	300	3.35	34.06	27.13	97.0	0.464	.074

MV ATTU
STATION 72

53-03 N 146-07 W 24 AUG 1958 2235 GCT
WEATHER 01 CLOUDS 6 AMT 4 WIND 190 15 KTS SEA 4
SWELL 200 AMT 2 BAR 1019 MBS DRY 11.9 WET 11.9 BT 109

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	11.50	32.68	24.90	
10	11.68	32.61	24.82	
25	11.54	32.59	24.83	
50	7.77	32.70	25.52	
75	6.16	32.75	25.78	
99	5.42	32.85	25.95	
124	4.84	33.05	26.17	
148	4.38	33.53	26.60	
198	4.06	33.78	26.83	
248	3.47	33.94	27.02	
297	3.73	34.14	27.15	

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
	0	11.50	32.68	24.90	306.0	0.000	
	10	11.68	32.61	24.82	314.5	0.031	
	20	11.60	32.59	24.81	314.8	0.062	
	30	11.52	32.62	24.85	311.4	0.093	
	50	7.77	32.70	25.52	247.5	0.149	
	75	6.16	32.75	25.78	223.4	0.208	
	100	5.39	32.85	25.95	207.3	0.262	
	150	4.37	33.54	26.61	145.0	0.350	
	200	4.02	33.79	26.84	123.1	0.417	
	250	3.48	33.94	27.02	106.9	0.474	
*	300	3.75	34.16	27.17	93.4	0.524	

MV ATTU
STATION 73

52-35 N 145-03 W 25 AUG 1958 0540 0614 GCT
WEATHER 03 CLOUDS 6 AMT 4 WIND 200 07 KTS SEA 3
SWELL 210 AMT 2 BAR 1024 MBS DRY 12.3 WET 12.1 BT 111

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	11.80	32.61	24.79	
10	12.11	32.57	24.70	
23	12.00	32.56	24.72	
48	7.20	32.70	25.60	
72	6.22	32.70	25.73	
96	5.61	32.75	25.85	
120	4.98	33.11	26.20	
144	4.61	33.41	26.48	
192	4.09	33.75	26.81	
240	3.82	33.96	27.00	
288	3.78	34.13	27.14	
384	3.59	34.22	27.23	
481	3.39	34.27	27.29	
675	3.24	34.31	27.33	
990	2.80	34.40	27.45	

INTERPOLATED AND COMPUTED VALUES

	DEPTH	TEMP	SAL	σt	$10^5\delta$	Δ D	OXY
	0	11.80	32.61	24.79	316.4	0.000	
	10	12.11	32.57	24.70	325.0	0.032	
	20	12.08	32.56	24.70	325.4	0.065	
	30	11.90	32.61	24.77	318.8	0.097	
	50	7.10	32.70	25.62	238.6	0.153	
	75	6.14	32.69	25.73	227.7	0.211	
	100	5.49	32.81	25.91	211.4	0.266	
	150	4.53	33.46	26.53	152.7	0.357	
	200	4.03	33.79	26.84	123.2	0.426	
	250	3.81	34.00	27.03	105.6	0.483	
	300	3.76	34.14	27.15	95.0	0.533	
	400	3.55	34.23	27.24	86.9	0.624	
	500	3.38	34.27	27.29	83.0	0.709	
	600	3.31	34.29	27.31	81.5	0.791	
	700	3.20	34.32	27.35	78.8	0.871	
	800	3.04	34.37	27.40	74.0	0.947	
*	1000	2.79	34.40	27.45	70.4	1.091	

MV ATTU
STATION 74

53-26 N 143-10 W 26 AUG 1958 0421 GCT
WEATHER 02 CLOUDS 6 AMT 9 WIND 190 07 KTS SEA 3
SWELL 200 AMT 2 BAR 1019 MBS DRY 12.5 WET 12.1 BT 114

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	12.90	32.27	24.32	
10	13.38	32.18	24.16	
24	13.40	32.17	24.15	
48	7.28	32.22	25.22	
72	6.41	32.61	25.64	
96	5.98	32.83	25.86	
120	5.98	33.21	26.16	
145	5.92	33.56	26.45	
193	5.53	33.83	26.71	
290	4.05	33.91	26.94	
509	3.86	34.12	27.12	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	12.90	32.27	24.32	361.3	0.000	
10	13.38	32.18	24.16	377.1	0.037	
20	13.39	32.17	24.15	378.3	0.075	
30	13.35	32.17	24.16	377.8	0.113	
50	7.19	32.26	25.26	272.6	0.178	
75	6.33	32.63	25.66	234.5	0.241	
100	5.98	32.90	25.92	210.3	0.297	
150	5.89	33.60	26.48	157.6	0.389	
200	5.39	33.84	26.73	134.3	0.462	
250	4.56	33.88	26.86	122.5	0.526	
300	3.95	33.92	26.96	113.5	0.585	
400	3.41	34.01	27.08	102.0	0.693	
500	3.78	34.11	27.12	99.1	0.794	

MV ATTU
STATION 75

54-13 N 141-33 W 26 AUG 1958 1517-1555 GCT
WEATHER 03 CLOUDS 8 AMT 9 WIND 240 08 KTS SEA 3
SWELL 250 AMT 2 BAR 1018 MBS DRY 11.7 WET 11.3 BT 117

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	13.70	32.36	24.23	
10	13.88	32.32	24.16	
25	12.94	32.38	24.40	
50	7.24	32.56	25.49	
74	6.20	32.65	25.70	
99	6.02	32.85	25.88	
124	5.97	33.17	26.13	
148	5.63	33.50	26.44	
198	5.38	33.81	26.71	
297	4.51	33.94	26.91	
520	3.83	34.14	27.14	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	△ D	OXY
0	13.70	32.36	24.23	369.8	0.000	
10	13.88	32.32	24.16	376.5	0.037	
20	13.46	32.36	24.28	365.7	0.074	
30	11.42	32.42	24.72	324.4	0.109	
50	7.24	32.56	25.49	250.9	0.167	
75	6.19	32.66	25.70	230.5	0.227	
100	6.02	32.86	25.88	213.8	0.283	
150	5.62	33.52	26.45	160.3	0.377	
200	5.36	33.81	26.71	136.2	0.451	
250	4.88	33.88	26.82	126.0	0.517	
300	4.49	33.94	26.91	117.7	0.578	
400	3.98	34.05	27.06	104.9	0.689	
500	3.82	34.13	27.13	98.0	0.790	

MV ATTU
STATION 76

55-00 N 140-00 W 27 AUG 1958 0320-0412 GCT
WEATHER 02 CLOUDS 8 AMT 8 WIND 270 05 KTS SEA 2
SWELL 280 AMT 2 BAR 1017 MBS DRY 12.9 WET 12.9 BT 120

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	14.10	32.37	24.16	
10	14.40	32.34	24.07	
24	14.10	32.35	24.14	
49	7.66	32.54	25.41	
73	6.64	32.66	25.65	
98	6.30	33.11	26.05	
122	6.54	33.49	26.31	
146	6.76	33.74	26.48	
195	6.45	33.87	26.62	
244	5.98	33.91	26.72	
293	5.50	33.94	26.80	
391	4.78	34.04	26.96	
489	4.45	34.13	27.07	
685	3.82	34.22	27.21	
1028	3.13	34.36	27.38	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	14.10	32.37	24.16	376.9	0.000	
10	14.40	32.34	24.07	385.3	0.038	
20	14.34	32.34	24.09	384.3	0.076	
30	12.05	32.40	24.58	336.9	0.112	
50	7.60	32.54	25.42	257.1	0.171	
75	6.59	32.70	25.69	232.4	0.232	
100	6.32	33.15	26.07	195.8	0.286	
150	6.74	33.75	26.49	157.1	0.374	
200	6.40	33.87	26.63	144.4	0.449	
250	5.92	33.91	26.72	136.1	0.519	
300	5.44	33.95	26.81	127.8	0.585	
400	4.75	34.05	26.97	113.4	0.706	
500	4.41	34.14	27.08	103.8	0.815	
600	4.07	34.18	27.15	97.9	0.916	
700	3.78	34.23	27.22	91.7	1.011	
800	3.53	34.27	27.27	86.8	1.100	
1000	3.17	34.35	27.37	78.2	1.265	

MV ATTU
STATION 77

54-05 N 138-12 W 28 AUG 1958 0439-0511 GCT
WEATHER 63 CLOUDS 6 AMT 8 WIND 140 02 KTS SEA 2
SWELL 170 AMT 2 BAR 1012 MBS DRY 12.2 WET 12.2 BT 123

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	14.70	32.55	24.17	
10	14.78	32.53	24.14	
25	14.64	32.54	24.18	
50	7.91	32.68	25.49	
74	6.94	32.70	25.64	
99	6.22	32.75	25.77	
123	5.78	33.10	26.10	
148	5.35	33.40	26.39	
197	4.92	33.74	26.71	
296	4.45	33.91	26.89	
518	3.95	34.11	27.11	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	14.70	32.55	24.17	375.7	0.000	
10	14.78	32.53	24.14	379.0	0.038	
20	14.73	32.53	24.15	378.3	0.076	
30	14.40	32.58	24.26	368.2	0.113	
50	7.91	32.68	25.49	250.9	0.175	
75	6.91	32.70	25.64	236.5	0.236	
100	6.20	32.77	25.79	222.7	0.293	
150	5.33	33.42	26.41	164.4	0.390	
200	4.90	33.75	26.72	135.4	0.465	
250	4.65	33.84	26.82	126.4	0.530	
300	4.43	33.92	26.90	118.5	0.591	
400	4.12	34.03	27.02	107.8	0.704	
500	3.96	34.10	27.10	101.8	0.809	

MV ATTU
STATION 78

52-00 N 131-35 W 29 AUG 1958 2030 GCT
WEATHER 01 CLOUDS 1 AMT 5 WIND 180 02 KTS SEA 3
SWELL 190 AMT 3 BAR 1009 MBS DRY 16.1 WET 14.4 BT 127

OBSERVED VALUES

DEPTH	TEMP	SAL	σt	OXY
0	14.90	31.75	23.51	
10	14.88	31.75	23.52	
25	14.60	31.88	23.68	
50	11.76	32.13	24.43	
75	9.02	32.65	25.30	
99	8.26	32.78	25.52	
124	7.80	33.03	25.78	
149	7.24	33.31	26.08	
199	6.69	33.61	26.39	
298	5.88	33.93	26.74	
521	4.85	34.10	27.00	

INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	SAL	σt	$10^5\delta$	ΔD	OXY
0	14.90	31.75	23.51	438.3	0.000	
10	14.88	31.75	23.52	438.2	0.044	
20	14.81	31.83	23.59	431.2	0.087	
30	14.02	31.91	23.82	409.8	0.129	
50	11.76	32.13	24.43	352.1	0.205	
75	9.02	32.65	25.30	269.6	0.283	
100	8.24	32.79	25.53	248.2	0.348	
150	7.23	33.32	26.09	195.5	0.459	
200	6.68	33.61	26.39	167.4	0.550	
250	6.25	33.79	26.59	149.1	0.629	
300	5.87	33.93	26.75	134.6	0.700	
400	5.27	34.10	26.95	115.8	0.825	
500	4.90	34.12	27.01	110.9	0.938	

Summary of Observations at Bathythermograph Lowerings, MV ATTU 1958 900' BT, Ser. No. 7750

Ser. No.	Time GCT	Date 1958	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed kts.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mbs	Weather	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
1	0130	5/16	56°29'N	156°00'W	6.1	21	35	39.0	-	12	02	-	0	5	4	24	4	-
2	Station 5																	
3	Station 6																	
4	Station 7																	
5	Station 8																	
6	Station 9																	
7	Station 10																	
8	Station 11																	
9	2320	6/18	54 20	167 00	6.9	03	25	44.0	-	02	02	2	8	6	5	03	6	-
10	Station 12																	
11	Station 13																	
12	2345	6/24	55 01	168 17	6.7	17	30	43.0	-	12	10	-	-	5	5	17	6	-
13	Station 14																	
14	Station 15																	
15	Station 16																	
16	2345	6/26	56 27	170 05	6.9	-	0	48.0	-	19	02	6	8	8	1	21	1	-
17	Station 17																	
18	Station 18																	
19	Station 19																	
20	Station 20																	
21	Station 21																	
22	Station 22																	
23	Station 23																	
24	Station 24																	
25	Station 25																	
26	Station 26																	
27	Station 27																	
28	2345	6/30	54 34	174 53	6.3	33	30	42.0	-	17	44	-	-	6	5	33	6	-
29	Station 28																	
30	Station 29																	

Summary of Observations at Bathythermograph Lowerings, MV ATTU 1958 900' BT, Ser. No. 7750

Ser. No.	Time GCT	Date 1958	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed kts.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mbs	Wea-ther	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
31	Station 30																	
32	Blank																	
33	Station 31																	
34	Station 32																	
35	2140	7/11	52°27'N	177°40'W	6.8	02	05	46.0	45.5	07	02	6	6	6	3	02	4	33.14
36	Station 33																	
37	0200	7/12	52 13	178 20	6.7	36	15	45.0	44.5	08	02	6	8	6	4	36	5	33.12
38	Station 34																	
39	2200	7/12	52 08	179 00	7.2	26	05	44.5	44.0	16	03	6	8	6	2	32	2	33.13
40	Station 35																	
41	0145	7/13	52 23	179 40	6.2	26	15	45.0	44.0	15	45	-	-	4	3	26	3	33.03
42	Station 36																	
43	2210	7/13	52 48	179 56	6.6	24	13	45.0	45.0	14	45	-	-	4	4	27	4	33.14
44	Station 37																	
45	0230	7/14	53 16	179 59	6.6	27	15	44.5	44.0	14	45	-	-	4	4	27	4	33.19
46	Station 38																	
47	2130	7/14	53 39	179°34'E	7.1	26	10	44.0	43.5	16	45	-	-	6	3	26	3	33.09
48	Station 39																	
49	0300	7/15	53 52	178 31	7.4	25	07	45.0	44.5	15	45	-	-	6	2	26	2	33.15
50	Station 40																	
51	Station 41																	
52	Station 42																	
53	Station 43																	
54	Station 44																	
55	Station 45																	
56	Station 46																	
57	Station 47																	
58	Station 48																	
59	Station 49																	
60	Station 50																	

Summary of Observations at Bathythermograph Lowerings, MV ATTU 1958 900' BT, Ser. No. 7750

Ser. No.	Time GCT	Date 1958	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed kts.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mbs	Weather	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
61	Station 51																	
62	Station 52																	
63	Station 53																	
64	0230	7/22	53°24'N	174°10'E	8.9	24	05	49.5	49.0	20	01	6	5	9	2	24	3	33.05
65	Station 54																	
66	Station 55																	
67	0510	7/29	52 15	175 49	6.9	28	05	46.0	45.5	21	01	8	6	8	3	11	3	33.11
68	0900	7/29	51 57	176 30	5.9	28	05	44.5	44.0	21	02	8	6	7	3	06	3	33.25
69	Station 56																	
70	1625	7/29	52 34	177 33	7.6	26	10	46.0	46.0	21	46	-	-	5	5	24	5	33.12
71	0305	7/30	52 58	178 09	8.1	28	25	46.0	46.0	22	46	-	-	5	5	30	5	33.06
72	0630	7/30	52 51	178 52	8.0	30	25	46.0	46.0	23	45	-	-	5	5	30	5	33.08
73	1000	7/30	52 43	179 43	6.1	31	25	45.0	45.0	24	45	-	-	4	5	31	5	33.24
74	1335	7/30	52 35	179°30'W	6.1	28	25	44.0	44.0	25	45	-	-	4	5	28	5	33.19
75	1728	7/30	52 27	178 40	7.4	28	10	44.5	44.5	26	45	-	-	5	4	28	5	33.13
76	2115	7/30	52 17	177 50	8.0	28	07	45.5	45.0	28	45	-	-	5	4	28	4	33.14
77	0100	7/31	52 07	177 02	8.0	28	09	46.0	46.0	29	45	-	-	5	4	28	4	33.16
78	Station 57																	
79	0240	8/5	52 45	174 59	8.5	28	03	48.0	48.0	11	44	6	9	4	3	28	3	33.12
80	Station 58																	
81	2140	8/5	53 15	174 56	8.5	00	00	47.0	46.5	19	44	6	9	5	2	32	2	33.14
82	Station 59																	
83	0255	8/6	53 47	175 00	8.8	00	00	47.0	46.5	19	44	6	9	6	1	24	2	33.13
84	Station 60																	
85	Station 61																	
86	Station 62																	
87	0005	8/8	55 01	174 07	9.1	17	25	49.5	49.5	18	01	6	7	7	5	17	6	33.07
88	Station 63																	
89	0730	8/11	52 24	171 44	6.4	24	07	46.0	45.5	10	01	6	8	8	3	24	3	33.26
90	1100	8/11	52 44	171 19	5.9	22	08	45.0	44.5	08	01	6	2	8	3	22	3	33.23

Summary of Observations at Bathythermograph Lowerings, MV ATTU 1958 900' BT, Ser. No. 7750

Ser. No.	Time GCT	Date 1958	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed kts	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mbs	Weather	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
91	1455	8/11	52°58'N	170°28'W	6.6	33	15	46.0	45.5	06	02	6	2	8	3	23	3	33.14
92	1840	8/11	53 10	169 49	6.2	24	12	47.0	46.0	05	03	6	4	7	3	24	3	33.18
93	2235	8/11	53 25	168 59	7.0	21	25	47.0	46.5	04	44	6	5	4	4	24	3	32.95
94	0930	8/16	53 12	165 42	9.9	00	00	48.0	47.5	12	01	8	1	9	1	33	1	31.89
95	Station 64																	
96	Station 65																	
97	2145	8/17	51 45	165 00	10.3	25	01	50.5	50.5	13	03	8	9	8	1	25	1	32.67
98	Station 66																	
99	0200	8/18	51 15	165 00	10.2	24	01	50.0	49.5	13	02	8	9	6	1	21	1	32.65
100	Station 67																	
101	2200	8/18	50 45	165 00	10.0	24	02	49.5	49.0	10	02	8	9	6	2	24	1	32.68
102	Station 68																	
103	0231	8/19	50 15	165 00	10.0	23	05	49.5	49.0	08	02	6	9	5	2	23	2	32.73
104	Station 69																	
105	0000	8/20	50 00	164 12	9.9	10	01	51.0	50.5	08	01	6	8	5	1	25	1	32.78
106	Station 70																	
107	0750	8/20	50 00	162 30	9.8	10	03	48.5	48.5	08	02	6	9	5	1	10	1	32.78
108	Station 71																	
109	Station 72																	
110	0120	8/25	52 52	145 35	11.8	20	12	54.5	53.0	23	01	6	4	8	4	20	2	32.65
111	Station 73																	
112	2145	8/25	52 51	144 25	12.6	20	02	54.0	53.0	24	03	6	9	7	3	20	2	32.59
113	0045	8/26	53 10	143 50	13.5	20	07	55.0	54.0	23	02	6	9	7	3	21	2	32.41
114	Station 74																	
115	0800	8/26	53 43	142 38	12.7	20	05	52.5	51.5	22	02	6	8	7	3	20	2	32.28
116	1130	8/26	53 59	142 06	12.6	26	06	52.5	52.0	22	01	6	7	6	2	26	2	32.22
117	Station 75																	
118	1900	8/26	54 31	140 55	13.7	25	08	54.0	53.0	21	03	8	8	8	3	25	3	32.43
119	2203	8/26	54 46	140 19	14.5	28	05	57.0	55.0	22	01	8	8	8	2	28	2	32.52
120	Station 76																	

Summary of Observations at Bathythermograph Lowerings, MV ATTU 1958 900' BT, Ser. No. 7750

Ser. No.	Time GCT	Date 1958	Latitude	Longitude	Bkt. Temp. °C	Wind Dir. °T	Wind Speed kts.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mbs.	Weather	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
121	2025	8/27	54°40'N	139°20'W	14.6	28	02	55.5	54.5	20	03	8	8	8	2	28	2	32.34
122	2355	8/27	54 23	138 48	14.9	28	01	56.0	55.0	19	02	6	7	8	1	28	1	32.55
123	Station 77																	
124	0901	8/28	53 46	137 38	14.7	15	10	54.5	54.0	11	01	6	8	6	2	15	2	32.22
125	1235	8/28	53 26	135 27	14.8	14	25	55.5	55.0	08	03	6	9	7	4	15	3	32.12
126	0400	8/29	52 41	134 21	15.5	06	35	59.0	58.0	01	03	6	8	5	6	06	6	32.36
127	Station 78																	

Plankton Data, MV ATTU, Numbers of Organisms per Cubic Meter of Water

Station	Hour (GCT)	Depth (m)	Volume (cc)	Wet wt (gm)	MEDUSAE	SIPHONOPHORE	CHAETOGNATHA	GASTROPODA	COPEPODA	EUPHAUSIACEA	AMPHIPODA	OSTRACODA	Crustacean larvae	TUNICATA	Miscellaneous	Total
9	07	150	155	16.6	8.7	10.9	30.5	10.9	1307.9	21.8		26.1	180.6	6.5	119.7	1723.6
		300	95	16.2	2.2	1.1	10.3	0.5	199.5	1.6		6.5	18.5	2.7	18.5	261.4
11	11	150	90	12.0	4.3	6.5	17.4	6.5	416.7	15.2	5.4	10.8	16.3	22.8	80.5	602.4
		300	100	16.7	6.5		8.7	2.2	308.0	18.5	6.5	8.7	22.8	1.1	33.7	416.7
13	07	150	70	6.6	2.2	8.7	13.1		487.4		1.1	3.3	81.6		71.7	669.1
14	07	150	65	11.0	4.9	1.6	7.6	1.6	133.6			4.4	24.5		7.6	185.8
		300	45	8.4	1.6	0.3	1.6	1.1	126.6	0.3		1.9	16.6	0.5	0.5	151.0
16	06	150	70	8.4	2.2	2.2	8.7	2.2	664.8	7.6	1.1	4.4	33.7		20.7	747.6
17	04	60	30	6.4	1.4		8.2	2.7	516.9		6.8	1.4	42.2		27.2	606.8
19	05	65	40	5.6	0.6		8.1	0.6	258.4						88.6	356.3
27	08	150	105	23.6	13.1	6.5	23.9		968.1	2.2	6.5		4.4	4.4	21.8	1050.9
		300	145	35.1	2.2	2.2	12.0		473.3		3.3	8.7			26.1	527.8
28	07	150	60	10.4	3.3		16.3	1.1	429.8	2.2	3.3	1.1			32.6	489.7
		300	90	18.2	5.4	3.3	19.6		308.9		1.1	3.3	1.1		18.5	361.2
30	06	150	80	11.5	2.2	22.8	12.0		452.6		1.1			2.2	15.2	508.1
		300	95	21.4	7.6	19.6	10.9	5.4	484.1	1.1		5.4			18.5	552.6
32	05	150	50	11.3	2.2	13.1	23.9		1442.8		8.7	2.2			15.2	1508.1
		300	85	15.5	21.8	33.7	54.4	5.4	1057.5	1.1	5.4	6.5			52.2	1238.0

Plankton Data, MV ATTU, Numbers of Organisms per Cubic Meter of Water

Station	Hour (GCT)	Depth (m)	Volume (cc)	Wet wt (gm)	MEDUSAE	SIPHONOPHORE	CHAETOGNATHA	GASTROPODA	COPEPODA	EUPHAUSIACEA	AMPHIPODA	OSTRACODA	Crustacean larvae	TUNICATA	Miscellaneous	Total
34	07	150	70	9.9	4.3	6.5	17.4		1190.3	4.4	2.2	4.4			15.2	1244.7
		300	120	21.5	10.9	4.4	34.8		1044.5		2.2	8.7			17.4	1122.9
36	06	150	45	5.9			21.8	5.4	764.9		3.3				8.7	804.1
		300	65	8.1	1.6	1.1	15.8	2.2	497.2	0.5	3.3	0.5			6.5	528.7
38	07	150	45	8.5			21.8		1512.2		2.2				26.1	1562.3
		300	90	15.4	5.4	1.1	29.4		570.1		3.3	2.2	2.2	1.1	4.4	619.2
40	08	150	45	9.8		2.2	13.1	1.1	539.7		2.2				4.4	562.7
		300	70	16.4	1.1	4.4	14.1		565.8		2.2	2.2			6.5	596.3
42	07	150	70	16.0	1.1	1.1	29.4	2.2	260.2		1.1	4.4		1.1	3.3	503.9
		300	85	18.8	2.7	2.7	9.8	3.3	275.9	0.5	1.1	9.8		0.5	4.4	310.7
44	06	150	65	7.8	1.1		19.6		1430.7	2.2	1.1				7.6	1462.3
		300	70	12.5	2.7		20.1		272.5		1.6				2.7	299.6
46	07	150	70	12.8	7.6	1.1	26.1	3.3	1075.9		3.3				12.0	1129.3
		300	90	19.2	10.9	1.6	8.2	1.6	436.3		1.6	1.6			8.7	471.6
48	07	150	35	6.3	2.2	1.6	18.5	2.7	379.6					1.1	13.6	419.3
		300	50	9.4	1.1	1.1	10.9	0.5	196.0			2.4	0.3		6.8	219.1
50	06	150	70	8.7	8.7	2.2	14.1	6.5	766.0		2.2			1.1	7.6	808.4
		300	60	10.5	3.3	2.2	27.2		486.2		0.5	4.9			9.8	534.1
		1710	130	21.2	0.6	0.6	1.9	0.4	59.1	0.6	1.0	1.5	0.6	0.6	3.3	71.0
52	07	150	75	14.2	1.1		17.4		448.2	1.1	2.2	3.3			8.7	482.0
		300	80	14.0	0.3		19.6	0.5	138.1		1.6	3.3		0.3	4.6	168.3

Plankton Data, MV ATTU, Numbers of Organisms per Cubic Meter of Water

Station	Hour (GCT)	Depth (m)	Volume (cc)	Wet wt (gm)	MEDUSAE	SIPHONOPHORE	CHAETOGNATHA	GASTROPODA	COPEPODA	EUPHAUSIACEA	AMPHIPODA	OSTRACODA	Crustacean larvae	TUNICATA	Miscellaneous	Total
54	06	150	85	11.9	4.3	4.3	39.2		674.5		23.9	2.2			28.3	776.7
		300	75	16.4	2.2	1.1	15.8	1.1	192.0		16.7	1.6		0.5	5.4	236.4
58	07	150	25	5.0	2.2	8.7	23.9	6.5	474.4	2.2		3.3		2.2	13.0	536.4
		300	75	10.9	3.8	6.5	13.0	2.7	101.1		1.6	12.5			7.1	148.3
60	06	150	30	6.3	0.5	3.3	21.2	0.5	162.7		1.6	0.5			6.0	196.3
		300	55	14.0	3.8	3.3	34.8	0.5	193.1		1.1			1.1	12.0	249.7
62	06	150	5	2.4	0.7	1.1	2.3	0.3	27.5		0.4				0.5	32.8
		300	65	11.3	1.4	1.6	12.2	1.6	63.8	0.5	0.8	2.4			6.2	90.5
63	07	150	20	6.1	0.8		0.8	0.5	76.8					0.3	2.7	81.9
65	05	150	20	3.3			3.3		38.7		10.1	0.3			6.2	58.6
		300	40	9.2	0.4	0.3	4.8	0.1	30.6		5.4	1.2			1.9	44.7
67	07	150	10	3.0		0.1	2.2		13.7	0.1	0.9	1.1		1.1	1.1	20.3
		300	30	4.2	0.1		1.4	0.3	29.0		0.4	3.0	0.1	0.3	1.8	36.4
69	06	150	15	4.4	0.3	1.9	4.3	8.7	63.6	0.3	0.5	0.3		0.8	3.0	83.7
		300	40	8.2		0.5	7.3	1.9	42.6		0.8	0.7		1.5	3.5	58.8
73	07	150	35	7.0	1.6		7.1	10.9	87.5	1.1	7.6	3.3		2.7	14.1	135.9
76	06	150	20	7.1	3.5	0.3	0.5	1.4	24.5		0.3	0.3	1.4	17.4	1.9	51.5

Plankton Data, MV ATTU, Numbers of Copepods per Cubic Meter of Water

Station	Depth (m)	Acartia	Calanus cristatus	Calanus finmarchicus	Calanus plumchrus	Candacia	Eucalanus bungii	Euchaeta japonica	Gaetanus	Heterorhabdus	Metridia lucens	Oithona	Pleuromamma	Pseudocalanus minutus	Miscellaneous
9	150	4.4	6.5	13.1	39.2		200.2				17.4	792.1		54.4	180.6
	300	1.1	0.5		3.8		81.6		0.5		7.6	49.0	0.5	33.7	21.2
11	150		6.5	12.0	19.6	1.1	107.7	1.1			32.6	143.6		70.7	21.8
	300	1.1	3.3	10.9	18.5		125.1		4.3	2.2	18.5	56.6		20.7	46.8
13	150		5.4	19.6	21.8		45.7	3.3			32.6	169.7		132.7	56.6
14	150		4.9	1.1	2.7	0.5	58.7	1.6		0.5	0.5	45.2		6.5	11.4
	300	0.3	1.9	0.8	6.8	0.3	43.8	0.5			1.4	50.9		6.8	13.1
16	150		1.1		3.3		101.2	8.7			50.0	400.4		69.6	30.5
17	60	17.7	1.4	10.9	42.2		9.5				1.4	266.6		148.2	19.0
19	65	33.7			18.7						9.4	93.6		43.7	59.3
27	150		23.9	15.2	485.2		28.3	2.2			6.5	152.3		204.5	50.0
	300		27.2	33.7	166.5		43.5		6.5		12.0	92.5	5.4	65.3	20.7
28	150		43.5	4.3	67.5		12.0				4.4	146.9		134.9	16.3
	300		15.2	2.2	14.1		52.2	1.1	1.1		1.1	132.7	1.1	71.8	16.3
30	150		7.6	6.5	60.9		72.9	1.1			6.5	167.6		83.8	45.7
	300		14.1	3.3	60.9		125.1	2.2	1.1		10.9	168.6		59.8	38.1
32	150		74.0	4.4	65.3		254.6				21.8	576.6		409.1	37.0
	300		31.5	5.4	45.7		94.7				177.3	366.7		262.2	74.0

Plankton Data, MV ATTU, Numbers of Copepods per Cubic Meter of Water

Station	Depth (m)	Acartia	Calanus cristatus	Calanus finmarchicus	Calanus plumchrus	Candacia	Eucalanus bungii	Euchaeta japonica	Gaetanus	Heterorhabdus	Metridia lucens	Oithona	Pleuromamma	Pseudocalanus minutus	Miscellaneous
34	150		52.2		102.3		213.2	2.2			2.2	609.3		200.2	8.7
	300		71.8	4.4	76.2	4.4	158.8				15.2	424.3		261.1	28.3
36	150		3.3	5.4	39.2		192.6				18.5	187.1		290.5	28.3
	300		3.8		21.8	0.5	132.2				13.6	94.6		205.1	25.6
38	150		50.0	41.3	263.3	2.2	356.9	2.2			6.5	604.9		152.3	32.6
	300		5.4	10.9	67.5		107.7	1.1			52.2	229.6	1.1	68.5	26.1
40	150		8.7	20.7	99.0		95.7		1.1		10.9	196.9		86.0	20.7
	300		5.4	5.4	46.8	4.4	146.9		1.1	1.1	16.3	200.2		89.2	49.0
42	150		21.8	5.4	59.8	1.1	65.3				2.2	224.1		58.7	21.8
	300		9.8	2.7	26.7	1.1	8.2	1.1			9.8	162.7		40.2	13.6
44	150		8.7	34.8	66.4		392.8				16.3	661.5		221.9	28.3
	300		6.0	4.3	24.5		138.7		0.5		9.8	65.3		9.8	13.6
46	150		5.4	16.3	90.3		187.1					622.3		100.1	54.4
	300		8.2	10.3	52.2		81.1		1.1		14.7	150.7		88.1	29.9
48	150		0.5	6.5	25.0		65.3					236.1		32.1	14.1
	300		0.3	1.9	9.5	0.5	24.5				1.6	118.0		27.7	12.0
50	150			2.2	76.2		155.6					412.3		97.9	21.8
	300		1.1	1.6	43.5	0.5	60.4			0.5	1.1	307.4		50.0	20.1
	1710		3.8	0.6	13.1	1.3	9.6	0.8	0.6	1.3	4.4	6.7	2.1	6.7	8.1

Plankton Data, MV ATTU, Numbers of Copepods per Cubic Meter of Water

Station	Depth (m)	Acartia	Calamus cristatus	Calamus finmarchicus	Calamus plumchrus	Candacia	Eucalamus bungii	Euchaeta japonica	Gaetanus	Heterorhabdus	Metridia lucens	Oithona	Pleuromamma	Pseudocalanus minutus	Miscellaneous
52	150		20.7		106.6		99.0		2.2		1.1	140.3		44.6	33.7
	300		1.6		27.2		32.9			0.8	6.8	43.5		15.2	10.1
54	150		34.8	2.2	154.5	2.2	289.4	6.5			28.3	97.9		23.9	34.8
	300		3.3	2.2	33.7	0.5	93.0				15.2	24.5		12.5	7.1
58	150		2.2	18.5	54.4		58.7		1.1		9.8	272.0		8.7	49.0
	300		6.5	1.1	21.8	0.5	25.0	0.5	2.7		15.2	12.0	1.1	7.6	7.1
60	150			8.2	83.8		20.1				2.2	25.0		4.9	18.5
	300		1.1	12.5	52.8		37.5	0.5			12.0	44.1		9.8	22.8
62	150		0.1	0.5	1.4		4.9	0.1			1.1	15.6		1.1	2.7
	300		3.8	2.4	4.6		16.0	0.8	0.5		6.0	16.9		4.1	8.7
63	150		0.3	7.6	10.9		7.6		0.3		3.0	18.2		15.0	13.9
65	150			2.2	2.7		3.3				1.1	12.8		3.8	12.8
	300		1.1	0.5	2.0	0.4	6.1	0.3	0.4	0.3	5.0	5.4	0.9	2.0	6.2
67	150	0.1	0.1	0.4	0.1	0.2	0.1	0.1	0.1		0.5	8.1	0.3	2.0	1.6
	300			0.1			0.1	0.1	0.1		0.5	20.0	0.1	4.1	3.9
69	150		0.5	1.4	5.2	0.3	2.4	0.3			2.4	40.5		7.3	3.3
	300		2.4	0.7	4.5		2.7	0.8	0.5	0.7	0.7	23.2	0.8	2.8	2.6
73	150		9.8	9.2	10.3			2.2			3.3	34.3	0.5	10.3	7.6
76	150		0.5	1.1			3.3				0.3	8.7		3.8	6.8

DRIFT BOTTLE RELEASES

GCT	Date	Latitude	Longitude	Vessel	No. Bottles
1000	May 19	53°43'N	162°25'W	Pioneer	50
0200	May 21	53 51	167 49 W	Pioneer	50
2400	May 21	51 42	175 00 W	Attu	47
0530	May 28	51 00	180 00	Attu	53
2050	May 28	53 05	179 56 E	Pioneer	50
0447	May 31	55 00	174 00 E	Pioneer	50
0508	June 1	48 32	178 29 E	Attu	50
0530	June 8	51 35	173 00 E	Pioneer	50
0610	June 8	53 37	175 02 E	Attu	50
0900	June 9	53 50	177 39 E	Attu	41

APPENDIX

Bathythermograph lowerings made by the Fisheries Research Institute, University of Washington

The biologists aboard the MV's CALIFORNIA ROSE, COMMANDER, and RENOWN made bathythermograph lowerings throughout the season to supplement the data collected along the Aleutian Chain by the vessels chartered by Pacific Salmon Investigations. The observations were restricted generally to the fish tagging areas.

These observations vary somewhat from those taken in conjunction with gillnetting. Wind direction is recorded almost always to the nearest two points of the compass. Wet bulb thermometers were not observed. In the COMMANDER's data, the barometer was recorded in inches graded to tenths, and the columns of barometer, weather, clouds, visibility, sea and swell have been converted to the HO 606-C code.

Summary of Observations at Bathythermograph Lowerings, MV COMMANDER 1958 900' BT, Ser. No. 7803

Ser. No.	Time GCT	Date 1958	Latitude	Longitude	Bkt. Temp. °F	Wind Dir. °T	Wind Speed kts.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mbs	Weather	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
1	2045	5/14	58°17'N	140°43'W	45.2	27	5	-	-	09	02	-	-	9	1	14	3	32.45
2	0200	5/15	58 16	142 07	45.5	27	5	-	-	16	02	-	6	9	1	14	1	32.50
3	1600	5/15	58 10	145 50	43.5	18	10	44.5	-	09	02	-	9	9	2	18	1	32.62
4	2030	5/15	58 07	146 52	44.0	18	5	47.0	-	12	02	-	4	9	2	18	1	32.67
5	2345	5/22	51 50	174 40	41.0	00	0	49.0	-	99	02	-	6	9	0	23	1	33.04
6	1645	5/23	51 03	175 08	41.0	05	15	39.0	-	96	02	-	9	7	2	18	1	32.73
-	0400	5/25	51 51	176 39	41.0	32	30	41.0	-	99	61	-	9	6	2	-	-	-
7	2200	5/27	52 05	179 12	42.0	00	0	44.0	-	85	63	-	9	3	0	09	1	32.67
8	2000	5/28	52°50'N	177°48'E	39.0	32	10	41.0	-	92	44	-	9	3	0	32	1	33.15
9	0210	5/30	54 00	174 00	38.5	05	10	41.0	-	92	02	-	6	5	1	05	1	33.15
10	2100	5/30	52 00	174 00	41.5	00	0	45.5	-	96	02	-	6	9	0	23	1	33.04
11	0030	6/2	52 47	175 05	40.5	32	20	44.0	-	09	02	-	2	9	3	-	-	33.04
12	2000	6/2	52 32	175 55	40.5	14	15	40.0	-	06	02	-	2	9	3	-	-	33.12
13	1900	6/7	51 45	177 35	40.0	05	15	39.5	-	19	02	-	9	9	3	36	1	32.98
14	1830	6/9	51°30'N	177°17'W	41.0	05	5	40.5	-	06	02	-	9	9	2	-	-	33.08
15	0315	6/10	51 30	176 45	42.5	05	15	42.5	-	06	60	-	6	7	3	-	-	32.78
16	1930	6/13	52 28	176 00	41.5	25	10	41.5	-	09	02	-	9	6	2	36	1	33.13
17	1915	6/14	55 05	175 40	41.0	32	5	43.0	-	12	02	-	9	6	2	32	1	33.19
18	1930	6/15	56 45	177 40	41.0	23	5	42.0	-	16	02	-	6	7	2	32	1	33.10
19	2230	6/16	56 55	173 13	42.0	16	15	44.0	-	19	02	-	7	6	3	-	-	32.83
20	2000	6/17	58 05	174 10	42.0	05	10	42.0	-	23	02	-	7	7	2	05	1	32.85
21	1930	6/18	60 10	173 00	41.5	00	0	46.0	-	26	47	-	-	1	0	00	0	32.18
22	0230	6/21	59 50	172 20	39.5	05	10	43.0	-	99	42	-	-	3	2	14	1	31.98
23	2000	6/21	58 10	171 25	42.0	32	15	-	-	92	02	-	9	4	3	32	1	32.17
24	0050	6/23	56 48	170 13	43.5	32	10	45.5	-	02	02	-	9	6	2	32	1	32.25
25	2030	6/24	56 40	169 40	42.5	14	15	41.0	-	09	61	-	9	5	3	14	1	32.23
26	2045	6/25	56 40	169 40	43.0	23	20	43.0	-	12	61	-	9	6	3	23	1	32.25
27	1930	6/26	56 40	169 40	42.5	23	5	46.0	-	19	02	-	9	6	2	23	1	32.25
28	2000	7/2	53 02	167 30	47.0	00	0	50.0	-	23	02	-	0	9	0	23	1	32.16
29	2330	7/4	52 47	168 37	46.0	23	10	47.0	-	06	02	-	9	7	2	23	1	32.29
30	2000	7/6	51 52	173 35	43.0	32	15	45.0	-	96	02	-	9	7	3	23	4	32.75

Summary of Observations at Bathythermograph Lowerings, MV COMMANDER 1958 900' BT, Ser. No. 7803

Ser. No.	Time GCT	Date 1958	Latitude	Longitude	Bkt. Temp. °F	Wind Dir. °T	Wind Speed kts.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mbs	Wea-ther	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
31	1745	7/7	51°42'N	176°05'W	43.0	32	15	44.5	-	92	02	-	4	7	3	23	1	33.19
32	2015	7/12	51 36	176 41	45.5	32	15	47.5	-	99	02	-	9	6	2	-	-	32.75
33	0315	7/15	51°18'N	179°05'E	44.5	00	0	50.0	-	16	02	-	9	9	0	23	1	32.96
34	1915	7/15	51 25	179 45	43.5	00	0	46.0	-	19	02	-	9	9	0	23	1	33.13
35	1915	7/18	51 48	177 35	43.2	32	5	46.0	-	06	02	-	9	9	2	14	1	32.94
36	2115	7/19	51 47	176 45	44.5	00	0	48.0	-	12	01	-	4	9	0	14	1	33.13
37	0115	7/20	51 48	176 25	46.0	00	0	50.0	-	12	03	-	6	9	0	14	1	33.16
38	1830	7/20	52 09	173 35	47.5	23	5	45.5	-	12	02	-	9	7	2	23	1	32.98
39	1830	7/21	54 00	169 50	48.5	23	20	47.0	-	19	02	-	9	6	3	23	1	32.98
40	1845	7/28	52 09	173 40	47.0	23	10	49.0	-	19	02	-	9	7	2	23	1	32.98
41	0030	7/29	51 58	174 03	46.5	27	15	46.5	-	19	02	-	9	7	2	05	1	32.97
42	2230	7/30	50°59'N	179°50'W	46.0	27	15	46.5	-	30	02	-	9	7	2	23	1	32.63
43	1900	7/31	51 26	176 48	45.5	27	15	46.5	-	33	44	-	9	5	2	23	1	32.74
44	0100	8/6	51 48	176 43	48.0	27	5	50.0	-	23	02	-	9	7	0	23	1	33.12
45	1900	8/6	52°13'N	173°33'E	48.0	14	15	49.0	-	23	02	-	9	7	2	-	-	32.99
46	2100	8/12	52 35	172 50	48.0	23	5	49.0	-	23	02	-	9	7	2	27	1	32.92
47	1900	8/13	53 16	170 23	48.0	14	5	51.0	-	23	02	-	9	7	2	18	1	32.90
48	1900	8/14	52 38	174 55	48.0	18	10	52.0	-	-	02	-	6	7	2	23	1	33.03
49	1730	8/17	51°36'N	177°37'W	-	09	10	-	-	16	02	-	6	7	2	14	1	31.81

Summary of Observations at Bathythermograph Lowerings, MV CALIFORNIA ROSE 1958 900' BT, Ser. No. 5560B

Ser. No.	Time GCT	Date 1958	Latitude	Longitude	Bkt. Temp. °F	Wind Dir. °T	Wind Speed kts.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mbs	Weather	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
1	1900	6/14	57°45'N	139°40'W	53.4	00	0	56.1	-	20	03	9	2	9	0	24	1	32.19
2	0340	6/15	57 45	139 40	53.0	10	5	52.0	-	19	03	0	7	9	2	24	1	-
3	1825	6/15	57 19	142 45	49.6	20	12	50.8	-	05	10	0	9	6	3	09	3	32.68
4	1800	6/16	56 03	147 02	48.0	03	30	53.0	-	08	01	8	3	9	4	30	3	-
5	0220	6/17	55 22	148 20	50.1	00	0	56.8	-	14	03	0	1	9	2	16	4	32.85
6	1810	6/24	54 49	154 45	45.5	18	5	44.9	-	14	20	7	9	8	2	18	1	-
7	1745	6/25	54 28	154 26	45.7	23	12	44.0	-	17	02	0	9	9	3	00	0	32.86
8	1840	6/29	59 00	152 44	47.5	09	7	48.6	-	12	02	0	9	7	1	00	0	31.92
9	1900	6/30	59 04	152 22	46.9	05	10	49.6	-	11	02	0	9	8	1	00	0	32.04
10	1800	7/21	52 32	155 35	47.3	14	10	47.9	-	11	20	7	9	8	3	14	2	32.77
11	1730	7/24	54 30	155 52	47.5	09	8	49.0	-	06	02	6	9	8	2	23	1	32.69
12	1700	7/26	54 37	154 42	49.2	09	10	50.0	-	99	10	6	9	3	2	18	1	32.57
13	1425	8/1	54 32	150 22	52.2	27	4	52.2	-	11	03	4	7	9	0	23	3	33.39
14	1810	8/8	56 16	149 55	54.5	23	4	56.3	-	09	03	3	3	8	1	36	3	32.43
15	1815	8/11	55 13	153 42	51.2	14	8	52.1	-	03	12	9	9	4	2	05	1	32.27
16	1715	8/16	52 25	156 40	50.3	00	0	50.3	-	07	50	7	9	7	0	27	1	32.83
17	2015	8/17	52 03	157 15	50.5	00	0	56.0	-	06	03	8	2	9	0	23	1	32.83
18	1715	8/18	51 00	157 11	50.6	00	0	51.1	-	04	16	0	9	9	0	23	1	32.75
19	0430	8/19	51 23	156 30	51.2	00	0	56.5	-	04	02	0	9	9	0	14	1	32.75
20	1710	8/19	51 57	155 45	51.0	36	2	52.0	-	04	02	0	9	9	0	09	1	32.55
21	1900	8/26	56 15	152 10	51.1	23	12	52.0	-	11	01	3	7	9	2	18	2	32.52
22	2215	8/27	54 51	154 44	51.0	09	12	52.2	-	07	02	6	9	8	2	14	2	32.22
23	1720	8/28	54 53	156 20	51.0	00	0	51.9	-	11	02	-	0	9	0	14	2	32.71
24	0415	8/29	55 00	156 30	53.5	00	0	59.6	-	10	02	-	0	9	0	14	2	32.58
25	1720	8/29	54 30	156 45	52.5	36	4	51.4	-	08	02	6	9	8	1	09	3	32.86
26	1745	8/30	55 20	156 40	52.1	00	0	52.8	-	10	02	8	1	6	1	18	2	31.18
27	1845	9/1	55 22	156 07	50.9	14	10	50.0	-	08	18	9	9	5	2	18	2	32.56
28	0030	9/5	56 21	153 09	52.0	01	2	55.2	-	03	02	1	2	9	0	23	2	32.33
29	1715	9/5	55 53	152 20	52.7	00	0	53.0	-	12	02	8	1	9	0	18	2	32.51
30	0030	9/6	55 42	151 49	52.0	32	5	56.8	-	10	03	8	6	9	2	18	2	32.65

Summary of Observations at Bathythermograph Lowerings, MV CALIFORNIA ROSE 1958 900' BT, Ser. No. 5560B

Ser. No.	Time GCT	Date 1958	Latitude	Longitude	Bkt. Temp. °F	Wind Dir. °T	Wind Speed kts.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mbs	Weather	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
31	1800	9/10	56°52'N	146°40'W	53.3	18	4	52.5	-	12	02	6	9	9	2	23	2	32.10
32	2300	9/10	56 55	146 00	53.6	18	8	49.5	-	11	02	6	9	9	2	23	2	32.39
33	1800	9/11	56 35	141 51	54.7	14	4	55.0	-	08	01	6	8	9	2	23	2	32.54
34	0050	9/12	56 16	140 35	54.9	14	3	53.2	-	08	02	6	9	9	2	23	2	32.10
35	1700	9/12	56 40	135 58	56.5	20	2	54.5	-	06	02	6	9	9	2	23	2	32.16
36	0020	9/13	56 38	135 50	53.9	00	0	57.0	-	05	02	6	8	8	0	23	2	31.50
37	1600	9/13	56 45	135 42	54.3	00	0	52.8	-	05	40	6	9	8	0	23	2	31.22

Summary of Observations at Bathythermograph Lowerings, MV RENOWN 1958 900' BT, Ser. No. 7859

Ser. No.	Time GCT	Date 1958	Latitude	Longitude	Bkt. Temp. °F	Wind Dir. °T	Wind Speed kts.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mbs	Weather	Clouds Type	Clouds Amt.	Vis.	Sea	Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
1	2300	6/7	52°34'N	172°50'E	42.5	34	0	46.0	-	-	01	8	9	8	1	08	3	-
2	0200	6/8	52 31	172 49	42.5	34	0	46.0	-	-	01	8	9	8	1	08	3	-
3	2400	6/10	54 00	172 26	40.0	05	15	46.0	-	-	50	-	9	6	3	-	2	-
4	0115	6/12	53 00	171 21	43.0	36	5	46.0	-	11	20	8	9	6	3	27	2	-
5	2115	6/12	53 00	171 20	42.5	27	10	42.0	-	11	28	8	9	1	3	05	4	-
6	2315	6/12	52 39	172 31	43.5	27	10	44.0	-	10	50	-	9	6	4	27	4	-
7	2200	6/15	52 26	175 08	43.0	00	0	44.0	-	10	50	-	9	6	1	36	1	33.07
8	2200	6/16	52 13	174 43	44.0	00	0	46.0	-	11	03	-	9	6	1	36	1	-
9	2145	6/17	55 06	174 16	42.0	27	8	46.0	-	15	02	-	7	6	-	36	3	-
10	2130	6/18	54 00	173 46	44.0	18	10	45.0	-	-	50	-	8	6	3	18	3	-
11	0340	6/26	51°30'N	176°37'W	45.0	20	10	46.0	-	82	47	-	-	0	5	18	4	-
12	2400	6/27	51 33	176 22	44.0	23	20	58.0	-	04	42	-	6	6	4	23	7	32.83
13	0420	6/30	51 35	176 11	44.0	27	20	46.0	-	10	03	8	6	7	5	27	6	33.01
14	0015	7/1	51 42	175 24	45.0	29	18	49.0	-	21	01	4	4	7	5	29	4	32.95
15	2300	7/1	51 37	176 52	44.0	20	12	47.0	-	25	03	5	6	6	3	23	3	32.87
16	0130	7/7	51 24	176 21	42.5	32	15	45.0	-	00	03	4	6	7	4	23	4	32.95
17	2240	7/7	51 38	177 46	42.5	27	10	47.0	-	04	03	5	6	7	3	32	4	32.99
18	2255	7/11	51°41'N	177°23'E	44.5	02	15	46.0	-	06	01	1	4	7	3	05	3	33.02
19	2040	7/13	52 25	174 15	44.0	25	10	46.0	-	12	03	5	6	6	2	25	2	33.06
20	2308	7/14	52 43	174 41	46.0	18	4	50.0	-	12	03	5	7	7	1	27	1	33.01
21	0033	7/16	52 27	172 56	46.5	14	5	52.0	-	11	01	5	7	6	3	14	2	33.00
22	2250	7/16	52 36	172 41	46.5	11	10	48.0	-	08	03	4	7	5	3	11	4	32.98
23	2325	7/17	52 38	172 50	47.	05	5	52.0	-	05	01	5	6	6	2	05	2	-
24	2200	7/18	52 59	171 42	47.0	05	2	57.0	-	08	01	1	4	7	2	07	2	32.94
25	0440	7/20	52 10	171 54	48.0	18	1	57.0	-	16	03	4	7	6	2	11	2	32.98
26	2320	7/20	53 03	173 23	48.0	32	1	51.0	-	12	01	8	6	7	2	32	2	-
27	0315	7/21	52 58	173 42	48.5	32	2	52.0	-	12	01	5	4	7	2	32	3	32.94
28	2043	7/21	52 39	172 44	49.0	27	5	54.0	-	18	01	9	5	6	2	25	3	32.91
29	2230	7/30	51 35	176 25	47.0	05	5	62.0	-	-	01	1	2	7	3	23	4	-
30	2225	7/31	51 30	176 45	45.0	23	10	50.0	-	-	03	8	7	5	4	23	4	-

Summary of Observations at Bathythermograph Lowerings, MV RENOWN 1958 900' BT, Ser. No. 7850

Ser. No.	Time GCT	Date 1958	Latitude	Longitude	Bkt. Temp. °F	Wind Dir. °T	Wind Speed kts.	Air Temp. Dry Bulb °F	Air Temp. Wet Bulb °F	Bar. mbs	Weather	Clouds Type	Clouds Amt.	Vis.Sea		Swell Dir. °T	Swell Amt.	Surf. Sal. o/oo
31	2200	8/5	51°30'N	176°15'E	44.0	00	0	54.0	-	-	03	9	6	5	4	25	4	32.88
32	2230	8/6	51°30'N	177°55'W	45.0	00	0	52.0	-	-	03	8	7	4	3	25	3	-
33	0410	8/13	51 38	177 42	47.0	29	20	46.0	-	-	03	8	7	5	4	24	4	-
34	2215	8/13	51 30	176 42	44.0	25	15	45.0	-	-	01	9	6	6	4	-	4	-
35	2230	8/16	51 37	176 15	44.0	18	5	53.0	-	-	01	9	-	6	2	18	2	-

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